OE # 20115-002

180641

REMOVAL ACTION WORK PLAN

126 Spicer Avenue
South Plainfield, New Jersey

Cornell-Dubilier Electronics Superfund Site
South Plainfield, New Jersey
Index Number CERCLA-02-2000-2005

August 2000
Revised October 2000

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Submitted to:

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EXECUTIVE SUMMARY

The United States Environmental Protection Agency (USEPA) has identified polychlorinated biphenyls (PCBs) at neighboring residential properties from the Hamilton Industrial Park in South Plainfield Township, Middlesex County, New Jersey. The property is located west of the Cornell-Dubilier Electronics, which is currently on the National Priorities List as a federal Superfund site. Removal action and site restoration of 126 Spicer Avenue has been mandated under an Administrative Order of Consent (AOC) issued by EPA under CERCLA 02-2000-2005. Oxford Environmental Inc., (Oxford) has been retained by DSC of Newark Enterprises, Inc. to respond to the removal action and site restoration requirements pursuant to the AOC.

This Removal Action Work Plan (RAWP) has been prepared in accordance with the requirements specified in the AOC. Specifically, this Work Plan defines the scope of activities, and outlines the procedures necessary to complete the removal of soils and restoration of the six properties. The activities include:

- Excavation and disposal of PCB-containing soils;
- Relocation of resident during removal action activities, as necessary to complete these activities;
- Verification sampling to ensure compliance with the AOC-specified cleanup goal for PCBs in soil;
- Restoration of properties disturbed as a result of soil removal activities;
- Implementation of quality assurance/quality control (QA/QC) protocols; and
- Implementation of health and safety procedures necessary to protect workers and residents.

On completion of field activities and validation of analytical data, a Final Report will be prepared which documents the work completed pursuant to the AOC.

1.0 INTRODUCTION

1.1 Background

The United States Environmental Protection Agency (USEPA) has identified polychlorinated biphenyls (PCBs) at 126 Spicer Avenue a residential properties in South Plainfield, New Jersey. This Property is located west of the Cornell-Dubilier Electronics Superfund site (Figure 1 - Site Location Map).

Removal action and site restoration activities of one particular residential property, 126 Spicer Avenue, has been mandated under an Administrative Order on Consent (AOC) issued by USEPA under CERCLA 02-2000-2005. Oxford Environmental, Inc. (Oxford) has been retained by DSC of Newark Enterprises, Inc. to manage and perform the removal action and restoration of the property pursuant to the AOC.

1.2 Site Setting

The Cornell-Dubilier Electronics site is located in a mixed industrial, commercial and residential area. The property is situated along Spicer Avenue in South Plainfield Township, Middlesex County, New Jersey.

1.3 Background

Various manufacturing operations have occupied or operated the facility located at 333 Hamilton Boulevard in South Plainfield, New Jersey. In particular, Cornell-Dubilier Electronics was involved in the manufacturing of electronic components including capacitors, from 1936 to 1962. It is alleged that during Cornell-Dubilier Electronics' operation of the facility, polychlorinated biphenyl (PCB) contaminated materials and other hazardous substances were disposed on-site and released to the environment. PCBs have been detected in soils at the industrial park, at adjacent residential and commercial properties, and in the surface water and sediment of the Bound Brook. The Cornell-Dubilier Electronics site was added to the final federal Superfund National Priorities List of hazardous waste sites in July 1998.

In November 1998, the USEPA collected approximately thirty-one (31) samples surface (0-2") soil samples at 126 Spicer Avenue and were analyzed to total PCBs. Analytical results indicated total PCB concentrations which ranged from 0.34 parts per million (ppm) to 6.2 ppm (estimated), Arochlor-1254 concentrations ranged from 0.31 ppm to 6.0 ppm. Arochlor-1260 concentrations ranged from non-detected through to 0.56 ppm.

1.4 Purpose and Scope of Work Plan

The purpose of the Work Plan is to define the scope of activities and procedures necessary to complete the removal action and restoration of the Property in accordance with the

AOC. The main activities compromising the removal action and restoration as specified in the AOC include:

- Delineation of the vertical and horizontal extent of PCB contamination in soil above 1.0 mg/kg, are described in Section 4. Property restoration plans are provided in Section 2.

- Soil sampling to verify attainment of cleanup objectives. Verification Sampling is discussed in Section 3.

- Excavation of PCB contaminated soil from the property and subsequent restoration. Excavation and restoration activities are described in Section 4. Property restoration plans are provided in Appendix C.

- Site preparation and temporary relocation of residents during soil removal and restoration activities as necessary to complete removal action activities. Site preparation and relocation requirements are described in Section 5.

- Off-site disposal of excavated soil. Disposal activities are described in Section 6.

- Implementation of permits and property access necessary to complete removal action activities. Permits and property access issues are described in Section 7.

- Implementation of Quality Assurance/Quality Control (QA/QC) protocols as part of a Quality Assurance Project Plan (QAPP). The QAPP is described in Section 8 and provided as Appendix A.

- Implementation of health and safety procedures for removal action activities. The Health and Safety Plan (HASP) is described in Section 9 and provided in Appendix B.

- Coordination of activities with residents and the community. Community relations are described in Section 10.

2.0 ASSESSMENT OF EXISTING DATA

2.1 Introduction

Shallow surface soil samples were collected by USEPA in November 1998 to determine the horizontal extent of PCB contamination present. Oxford will collect deeper soil samples at the Property and utilize existing shallow soil samples to delineate contamination as described below.

Based on the data for the shallow soils and the results obtain from the deeper soil samples an estimation of the total removal action will be made.

2.2 Horizontal Delineation of PCB-Containing Soils

Identification of areas to be remediated at 126 Spicer Avenue was based on surface soil data collected in November 1998 by USEPA. This evaluation was conducted according to the following data assessment methodology:

Step 1-Assemble Existing Data Set
The PCB concentrations measured in surface soil samples were assembled to evaluate removal requirements at the subject site. In the sample in which a non-detected concentration was reported, one-half the detection limit for Aroclor 1254 and Aroclor 1260 was used in all calculations. For duplicate sample pairs, the average of sample pairs was used in the calculations.

Step 2-Test for Data Distribution
The Shapiro-Wilk test (USEPA, June 1992) was used to determine if the PCB data for this property followed a normal or log-normal distribution.

Step 3-Determine Baseline 95% UCL Value
The current (unremediated) 95% UCL was calculated according to the data distribution identified in Step 2 (USEPA, May 1992).

Step 4-Identify Sample Locations for Removal Action
Samples were eliminated from the property data set beginning with samples with the highest concentrations. The reduced data set (portion of the property that will not be removed) was retested for distribution type (normal/log-normal) and a new 95% UCL was calculated. This process was repeated until the projected 95% UCL value for the reduced data set no longer exceeded 1 mg/kg.

Step 5-Definition of Removal Area
Sample locations eliminated from the property data set in Step 4 are designated for soil removal. The exact areas to be excavated are determined in accordance with the procedures described in Section 4.2.

2.3 Vertical Delineation of PCB-Containing Soils

The shallow surface soil samples collected by USEPA in November 1998 were used to determine the location and extent of vertical sampling to be conducted prior to excavation. Three locations were determined to require further vertical delineation based on these samples exhibiting the highest PCB concentrations (area near CDFF014, area between CDFF009 and CDFF012 and area near CDFF017). This will then determine the vertical delineation of PCB contamination and the depth of soil to be excavated within these areas. The additional samples will be collected to a maximum depth of 3 feet below grade at 6-inch intervals. Samples up to 1.5 feet will be analyzed initially. Based on these results, it will be determined whether analysis of an additional 6-inch interval is necessary. If samples at 3 feet are analyzed and still indicate elevated levels of PCBs, Oxford will consult with USEPA and develop an alternate delineation strategy. This finding requires that Oxford re-evaluate the statistical methods used to develop this RAWP. Section 3.2 further describes the sampling methodologies and procedures.

2.4 Identification of Remedial Sample Locations

Thirty-one (31) shallow surface samples and two duplicate samples were collected on Property FF by USEPA. Data for the shallow surface soil samples were statistically analyzed as described in Section 2.2. Six (6) of the thirty-one (31) samples were removed from the data set in order to meet the cleanup goal. Sample locations, including the six (6) samples identified for removal are shown in Figure 4.

Table 2-1
Statistical Analysis of Property Characterization Data

Number of Samples Used in the Statistical Analysis	Function Distribution	Maximum Concentration (mg/kg)	Mean Concentration (mg/kg)	Standard Deviation (mg/kg)	95% Upper Confidence Level of Mean
31	NORMAL	6.2	1.35	1.22	1.78
Remove CDFF006; CDFF009; CDFF012; CDFF014; CDFF015; CDFF017					
25	NORMAL	1.62	0.88	0.3	0.95

3.0 SAMPLING AND ANALYSIS PLAN (SAP)

3.1 Objectives

The sampling and analysis (SAP) describes the procedures and methods to be implemented to sample soil and wastes generated during removal action activities to be conducted at 126 Spicer Avenue. The SAP addresses the following elements:

- Excavation verification sampling requirements;
- Disposal sampling requirements;
- Standard field sampling and sampling decontamination protocols;
- Sample management; and
- Laboratory analytical methods.

Air monitoring and analysis procedures are included in the site specific HASP described in Section 9.

The SAP includes standard sampling and analysis procedures, sample management procedures, and incorporated US EPA Chain of Custody procedures, as set forth in "Test Methods for Evaluating Solid Wastes" (SW-846) (November, 1986 and as updated) for sampling and testing, as required by EPA.

3.2 Proposed Verification Sample Collection

In accordance with the AOC, sampling must be performed to verify attainment of the cleanup criterion. In order to facilitate the excavation and backfilling processes, and to minimize the inconvenience and impact on the people residing at the properties where soil excavation is to be performed, verification sampling will be conducted prior to excavation rather than in the conventional post-excavation manner. In accordance with the AOC, verification sampling will at a minimum include:

- The collection of one sample from the excavation bottom for every 900 square feet of bottom area; and

- The collection of one sample at the bottom of each sidewall for every thirty (30) linear feet of sidewall.

The bottom verification samples will be collected as grab samples from the six-inch interval below the proposed excavation depths. The excavation depths will be determined based on the results of these samples.
Oxford proposes to use the Strategic Diagnostic Inc. Ensys field test kit along with laboratory verification analysis to delineate the vertical extent of PCB contamination. The

Ensys field test kit will be calibrated to measure concentrations of PCB Aroclors 1254 and 1260 at a detection limit of 1 ppm and 5 ppm. Oxford will test the three locations identified in Section 2. These locations are shown in Figure 4. Area A will have one bottom sample location and Areas B and C will have two bottom sample locations. In the event that any samples are determined to have a concentration of greater than 5 ppm, the sample(s) will be sent to the laboratory to determine if the total PCB concentration exceeds 50 ppm.

Bottom verification samples shall be collected in 6-inch intervals starting with the 6-12-inch interval and the 12-18 inch interval. Based on previous surficial samples collected by the USEPA the depths of excavations will be a minimum of 6 inches in depth. Therefore, the collection of the 0-6 inch bottom sample is unnecessary, since that soil will be removed regardless of results.

When the Ensys field-test kit analysis determines that two (2) consecutive samples shows less than 1 ppm, both samples will be split and sent to the laboratory for verification (the lower interval sample will only be analyzed if the upper sample is determined to be greater than 1 ppm). Provided that the laboratory verification determines the interval to have a PCB concentration of less than or equal to 1 ppm, the excavation will be performed to the previous 6 inch interval depth. For example, if the laboratory verifies that the 6-12 inch sample is less than or equal to 1 ppm the excavation depth will be to 6 inch.

The Ensys field test kit procedure will be continued (up to a maximum of three (3) feet below ground surface) until two (2) consecutive less than 1 ppm intervals are reached. In the case where the Oxford's field sampling shows that at three (3) feet below ground surface the samples are still above 1 ppm, Oxford will consult with USEPA and develop an alternate RAWP.

The sidewall verification samples will be collected as grab samples from the sides of the proposed excavation areas at the six-inch interval above the proposed bottom depth of the excavation areas. Area A will have two (2) perimeter samples, Area B will have five (5) and Area C will have three (3). These samples will be analyzed using the Ensys field test kit. Verification sidewall sampling will include the collection of a sample from a 0- to 6-inch depth in addition to the sample to be collected at the 6-inch interval above the depth of excavation. In the case where the total depth of excavation is determined to be 1-foot only one sidewall sample will be collected at each location.

The purpose of the 0 to 6-inch surface soil sample is to verify the horizontal surficial limits of excavation. For cases where excavations extend to a horizontal barrier, no sidewall verification sampling will be conducted, as the excavation has been extended to a point at which no direct exposure to soil exists. Similarly, no sidewall samples will be collected where the excavations extend to the limit of residential use associated with the subject property. For excavations extended to the nearest surface soil sample not identified for excavation, the 0- to 6-inch sidewall sample will not be collected.

In cases where sidewall perimeter samples indicate levels above 1 ppm PCB, Oxford an additional sidewall sample shall be obtained 6 inches beyond the excavation limit. This process will be continued until a sample is reached that is less than 1 ppm or until the nearest surficial sample point is reached. However, DSC may choose to extend the excavation to the nearest horizontal barrier (existing pavement or physical structure), to the limit of apparent residential use (including fence lines), or existing surface sample location not identified for excavation, in order to reduce the amount of samples analyzed via the Ensys field test kit.

Upon request by USEPA, DSC will provide USEPA or its designated representatives with duplicate and/or split samples of any material sampled in connection with the implementation of the AOC.

3.2.1 Verification Sampling: Bottom Area Sample Locations

The following steps will be used to identify sample locations at the bottom of each excavation area:

- For each distinct excavation area within a property, the total excavation area will be determined.
- The number of excavation bottom samples will be computed by dividing the excavation area by 900. Any fraction will be rounded up to the nearest whole number.
- The appropriate number of samples will be positioned in central locations, offset from any deep sample locations previously sampled for vertical delineation purposes.

3.2.2 Verification Sampling: Sidewall Locations

The following steps will be used to identify sample locations along each excavation sidewall:

- The total linear feet of the excavation boundary to be sampled will be determined. This excludes sidewalls adjacent to the house, paved areas and residential use boundaries associated with the subject property.
- The number of sidewall samples required will be computed by dividing the total linear feet of sidewall (as determined above) by 30 and by rounding up any fraction to the nearest whole number.
- The appropriate number of samples will be evenly distributed along the sidewall. If only one sample is to be collected, the sample will be positioned in the center of the section. If two or more samples are to be collected, the samples will be spaced apart such that the distance between each end sample and the sidewall border is equal to the distance between each sample.

3.3 Disposal Sample Collection

Disposal facilities have been identified for final disposal of PCB contaminated waste as described in Section 6. These facilities have been contacted regarding pre-approval waste sampling and characterization requirements. The data collected as part of the completed sampling program described in Section 2 will be expected to satisfy the frequency sampling required for characterization of PCB concentrations in soils for disposal purposes. Additional waste characterization analysis may be required by individual facility requirements. These requirements are discussed in Section 6.2.1.

3.4 Field Procedures

This section describes the general approach for implementing field sampling activities for the collection of verification soil samples from this property. The following field protocol will be used.

3.4.1 Shallow Surface Soil Sampling

Shallow surface soil samples will be collected from 0 to 6 inches below any surface cover using a designated clean sampling spoon and/or hand auger. The auger will be decontaminated between each sample, following the procedures described in Section 3.4.3.

3.4.2 Deep Soil Sampling

Soils samples from below a depth of 6 inches will be collected using a clean hand auger. Soils will be collected from and interval of 0 to 6 inches at the specified depth. The hand auger will be decontaminated between each sample interval, following the procedures described in Section 3.4.3. For samples to be collected only from a single discrete interval, one auger may be used until the top of the sampling interval is reached, and then a new decontaminated auger will be used to collect the sample.

3.4.3 Sampling Equipment Decontamination Procedures

All sampling equipment will be decontaminated prior to use and will arrive on-site in clean condition. All sampling equipment will also be decontaminated between each use using the following or equivalent procedure:

- Place dirty equipment on plastic ground sheet or in similar containment area;
- Wash thoroughly with a laboratory detergent (Alconox or equivalent) to remove any particulate matter and/or surface films using bristle brush, as needed;
- Rinse thoroughly with clean potable water;

- Air-dry; and

- Wrap decontaminated equipment in aluminum foil (shiny side out) for storage and transportation.

Prior to implementing decontamination of the sampling equipment, a location within the sampling area will be designated for these activities. Wash water will be allowed to evaporate or infiltrate in the ground.

3.4.4 Sample Identification and Management

Oxford personnel will keep a bound field notebook recording all activities at the site. All samples submitted for analysis will be collected and shipped by Oxford personnel. Each sample will be given unique sample identification numbers.

The initials CDFF, followed by the date of sample collection will precede all sample numbers (i.e. CDFF081500-01A for a sample collected on 8/15/00 at location 1 with a depth of 6 inches). For samples 0 to 6 inches they will denoted A after the sample number, for samples 6 to 12 inches a B, for 12 to 18 inches a C, for 18 to 24 inches a D, 24 to 30 an E and 30 to 36 inches an F.

All QA/QC codes that will follow sample identifications, when necessary are as follows:

- MS – Matrix Spike
- SD – Matrix Spike Duplicate
- MD – Matrix Duplicate
- FD – Field Duplicate
- RS – Rinsate Blank
- FB – Field Blank
- TB – Trip Blank

A designated laboratory will provide all sampling containers. Samples will be stored in coolers until they can be shipped to the laboratory. Samples will be transported from field to designated laboratory via Oxford personnel. All sample containers will be shipped with chain of custody records. Each cooler will have separate chain of custody records. All samples will be transported to the designated laboratory as excluded materials (as defined in 40 CFR Part 261.4).

Upon sample receipt at the designated laboratory, all sample collection dates are to be noted by the sample custodian. The required date for completion of analysis (or extraction) will be noted and keyed to the holding time. Designated laboratory personnel will be assigned and will be responsible for ensuring proper execution of all required analysis.

3.5 Laboratory Analytical Methods

Soil samples will be analyzed for PCBs. All analyses for PCBs will comply with the analytical procedures presented in USEPA's *Test Methods for Evaluating Solid Waste (Physical/Chemical Methods)*, SW-846, November 1986. Method 8082 (Revision 0, December 1996) will be used for PCB analyses.

4.0 EXCAVATION AND RESTORATION PLAN

4.1 Introduction

Areas and depths of excavation will be delineated based on the results of the deeper soil samples collected as mentioned in Section 3.3. Verification sampling is proposed to be completed prior to excavation in order to verify the limits of excavation and minimize the duration of open excavation on each property. The results of this sampling will be used to refine the excavation depths and areas, if necessary, as described in this section.

4.2 Scope of Excavation

The sampling data identified in Section 2.1 will be combined with the final verification sample data (excavation limits) and analyzed using the data assessment methodology described in Section 2.3. The results of the combined data will be utilized to determine the final extent of excavation. Excavation areas and volumes will then be defined as described in this section.

Oxford will utilize previously approved methodology that was established by ENVIRON in implementing their *Residential Property Removal Work Plan* for this same project in association with the Hamilton Industrial Park.

Based on an evaluation of soil characterization data collected as part of other CERCLA PCB soil characterization programs, ENVIRON developed an approach for preparing preliminary estimates of the areas of PCB contamination in soils. The following approach is applied for the preparation of removal action area estimates:

- The removal action area associated with a given sample location is considered to be rectangular.

- Horizontal boundaries of PCB removal action areas are established midway between contiguous sampling points. Barriers such as walls and pavement boundaries, where present, and the Property boundaries (or associated limits of residential use) are also taken to be horizontal boundaries.

- Vertical boundaries of PCB removal action areas are determined by the analytical results of the nearest vertical soil sample collected during pre-excavation sampling. Vertical boundaries are established and described in Section 3.2 above the lowest interval depth with the PCB concentration below or equal to 1 mg/kg.

4.3 Statistical Identification of Remedial Excavation Limits

Prior to removal action, verification samples will be collected from the base and sidewalls of each proposed excavation area in accordance with the excavation verification

procedures described in Section 3.2. The extent of required excavation will be determined by statistical analysis in accordance with Section 2.3. Specifically, the verification data obtained from sampling will be combined with the remaining surface soil sample data from the portion of the property that remains unexcavated. The combined data set will then be tested for a normal and log-normal distribution, and a new 95% UCL of the mean PCB concentration for the property will be calculated.

In the case where the 95% UCL value for a property exceeds 1 mg/kg, laboratory analysis will be conducted on the supplemental bottom samples collected below the initial verification samples that must be excluded from the statistical data set in order to meet the cleanup criterion. The supplemental sampling data will replace the associated initial verification sampling data and the statistical analysis will be conducted with the new data set. Therefore, the supplemental bottom samples will be utilized to determine excavation depths. Alternatively, if the 95% UCL value is less than or equal to 1 mg/kg, the initial verification samples will be used to define the soil removal boundaries.

4.4 Excavation Procedures

Each property will be prepared prior to excavation in accordance with the procedures described in Section 5. Excavation areas will then be measured and stake out as determined by the statistical analysis described in Section 4.3. Removal of soil and vegetation will be performed using machine and manual excavation methods, depending on the proximity to structures and mature trees. Shovels or other manual soil removal equipment may be utilized if the excavation is located in an area inaccessible by other means. Hand excavation will be conducted at the base of mature trees located within designated excavation areas. Removal of constructed features is not anticipated at this site. Soil erosion control measures will be implemented as needed to prevent migration of soils out of the excavation areas. A water mist will be employed as necessary during excavation in order to control airborne migration of dust; the need for dust control will be determined in accordance with the HASP (see Section 9). Every possible effort will be made to have all excavated areas filled with clean backfill at the end of each workday. In the event that the excavations are not filled at the end of the workday, they will be secured with construction fencing.

Specific depths of excavation will be determined based on the results of the additional soil samples collected to determine vertical delineation. The areas to be excavated are depicted in Figure 4.

4.5 Soil Loading and Staging Procedures

Excavated soil is to be directly loaded into trucks from the excavation areas. Trucks awaiting receipt of excavated soil will be staged along Spicer Avenue. Trucks to be loaded will be parked on the street in front of 126 Spicer Avenue or on the existing asphalt driveway. Loaded excavation machines (i.e. backhoes) will utilize only the designated pathway in order to transport soil from the excavation area to the truck. Manually

excavated soil will be transported along the same path using a wheelbarrow or other mobile transport mechanism. In the event that any contaminated soil is spilled onto the existing sod, this sod will be removed and replaced.

4.6 Equipment Decontamination Procedures

Mechanized equipment (i.e. backhoes/loader) will begin excavations from a clean area and will excavate linearly, so that the wheels of the machine do not contact PCB-containing soils within an excavation area. In order to prevent excavated soil from contacting clean soil outside the exclusion zone, plastic sheeting will be placed along the path of the excavating equipment. As soil spilled on the plastic may contact the wheels of mechanized equipment, the plastic will be periodically swept toward the exclusion zone and collected for transfer to the dump truck. During transport of excavated soil to the disposal truck, mechanized excavation equipment will be required to stop in the decontamination zone for visual inspection and removal of any accumulated dust or soil.

At the end of each workday, excavation machines and hand-held equipment may remain on-site at the discretion of the excavation contractor. Alternately, such equipment may be removed off-site or stored in the staging area described in Section 5. All equipment remaining onsite at the end of each day will be secured with construction fencing. Any heavy equipment leaving the Property at the end of the workday must be decontaminated by power washing, steam cleaning or any effective means identified in 40 CFR Part 761. Wheels of excavation equipment must be visually inspected and any accumulated dust or soil will be removed for disposal. Wash water from the decontamination area will be collected for off-site management.

4.7 Property Restoration

Following completion of excavation activities each work day, the excavated areas will be backfilled with clean fill and graded to original condition. Restoration of landscaping and certain site features will be dependent on weather conditions. Landscape restoration will be to existing conditions or equivalent value. Appendix E discusses the restoration plans.

Before excavation begins a Certified Professional Soil Specialist (CPSS) will travel to the source of the proposed fill and topsoil. The CPSS will evaluate the proposed fill and topsoil and provide a certification that this material is from a virgin source (that is, without industrial or agricultural use). The CPSS will request analysis that shows that the soil reaction is neutral (pH 6.6 - 7.3) and that the topsoil soil texture corresponds to loam soil texture with an organic matter content of 1 – 3 percent. The soil reaction of the fill will also be neutral and correspond to a loam, sandy loam, or gravely sandy loam texture. All texture will correspond to the textural classification of the by the U. S. Department of Agriculture, Natural Resources Conservation Service.

Alternatively, the CPSS will identify that this fill and topsoil is not from a virgin source. The CPSS will request soil analysis as listed above to determine its textural and suitability as a

plant growth medium. In addition the CPSS will obtain representative samples at the rate of one sample per 1000 cubic yards of fill and topsoil material. (Available estimates suggest that approximately 2,778 cubic feet of fill and topsoil is needed.) Each sample will be analyzed to identify Target Compound List plus 30 and Target Analyte List parameters. The CPSS will compare the results of testing with NJDEP Soil Cleanup Criteria and certify that the sample data for the fill and topsoil testing meets the NJDEP residential direct contact standards. Figure 6 includes the site map and restoration plan areas.

5.0 SITE PREPARATION

5.1 Introduction

This section summarizes the activities that will be conducted on or in the vicinity of the Property prior to implementation of the soil excavation action defined in Section 4.

5.2 Property Survey

A land survey will be conducted on this Property to verify the metes and bounds. As part of this survey, the property corners will be identified with a wooden surveyor's stake or pin. An inventory will be taken of the existing vegetation and construction features on the Property and photographs will be taken so that the areas disturbed as a result on the removal action may be restored to pre-construction conditions or equivalent. The survey, inventory and photography activities will be completed prior to implementation of this Work Plan. Documentation resulting from these activities will be used in the development of a restoration schedule for the property.

5.3 Resident Relocation

The removal action activities on this Property will be scheduled to minimize disruption of residential activities. Based on the defined scope of excavation, short duration of remedial activity, and the dust control proposed in this Work Plan, limited residential relocation is anticipated for this Property. Continuous air monitoring will be conducted at residential portals and dust control measured will be taken during remedial activities as described in Section 9. If the resident desires to voluntarily relocate during excavation activities on his or her property, relocation will also be implemented in accordance with the relocation procedures described below. Expenses for temporary relocation will be addressed through a per diem payment.

5.4 Security

Prior to excavation activities, work zones will be defined as described in Section 5.5. All personnel entering the Property will sign and entry/exit log. Only authorized personnel meeting the requirements of the HASP will be allowed access to the Property. Entry onto the Property by other personnel will be at the discretion of the Project Coordinator and in accordance with the HASP. Exceptions to this policy will be documented by a signed waiver from individuals entering the Site. The Project Coordinator and the USEPA On-Scene Coordinator will restrict access to the property.

In the event that it is determined that the residents need to relocate, continuous security service will be provided during non-working hours while residents are temporarily relocated.

5.5 Preparation of Work Site

5.5.1 Delineation of Work Zones

Initial work zones at this site are proposed in Figure 5. Oxford will delineate exclusion zones, contamination reduction zones and clean zones in accordance with the HASP. Exclusion zones include all areas proposed for excavation and any clean areas located between excavation areas as designated in Figure 5. Contaminant reduction zones are buffer zones between the exclusion zones and the clean areas defined below. The contaminant reduction zones include, where feasible, clean areas on the Property surrounding the exclusion zones. Due to the limited work area at this Property and the proximity to other residences not included in the Work Plan, it will not be feasible to designate contaminant reduction zones around the complete perimeter of each exclusion zone. Clean zones are those areas not included in the scope of this Work Plan and include equipment storage areas and facilities. Decontamination zones are those areas on the Property designated for decontamination of remediation workers. Decontamination zones will be located on areas adjacent to each exclusion zone that have not been identified for soil removal action. The perimeters of these zones will be clearly marked on each Site, and entry to the various areas will be controlled to limit access to authorized workers wearing the proper equipment. The perimeters of the work zones will be redesignated as soil removal activities progress. The HASP addresses the restriction to access in each work zone and the required levels of protection.

5.5.2 Residence Preparation

Portals (i.e., windows, doors, vents, etc.) to the home located at this property where excavation activities are to be conducted will be sealed with plastic sheets and tape during excavation in order to minimize the potential of dust from excavation activities entering the residence.

5.5.3 Utility Markout

Underground utilities on this Property will be identified prior to excavation by the contractor using the New Jersey One Call service and any additional resources required. No electricity is anticipated to be required during implementation of the Work Plan. Water will be transported to each Property each day as anticipated for decontamination activities and dust control. If a continuous water supply is required, contractors will record water usage so that appropriate compensation may be provided to the residents upon completion of Work Plan activities.

5.5.4 Staging and Storage Area

In the event that direct loading cannot occur (e.g., the trucks are not available for loading during excavation or larger loaders are required to place soil into the dump trucks), the soil will be temporarily staged on site. A plastic liner will be placed on the ground to fully

contain the temporary soil stockpile and any associated debris. A silt fence will also be placed surrounding this staging area. If disposal transportation is not available by the end of the workday, a plastic tarp will be securely placed on top of the soil pile to prevent any erosion by the wind or rain. The temporary soil staging area is designated on Figure 5.

5.5.5 Decontamination Areas

Prior to implementation of excavation activities, decontamination areas will be adjacent to each exclusion zone as described above. Workers exiting the exclusion zone on foot must follow decontamination procedures as described in the HASP. Hand-held equipment must be decontaminated in accordance with decontamination procedures described in Section 3.4.3. Heavy equipment will be decontaminated in accordance with procedures described in Section 4.6.

6.0 DISPOSAL PLAN

6.1 Scope of Removal Activities

Based on the results of the shallow soil samples collected by the USEPA in November 1998 and the upcoming sampling event to delineate vertically a total of soil to be removed will be estimated.

The maximum concentration of PCBs determined for this site was 6.2 mg/kg. According to 40 CFR Subpart 761, soils with PCB levels less than 50 mg/kg may be disposed of in a Subtitle D landfill if otherwise classified as non-hazardous. The excavated soil from the Property is expected to be categorized as non-hazardous, non-TSCA waste. DSC anticipates shipping excavated soil that are characterized to be non-hazardous, non-TSCA regulated waste to Casie Protank Ecological and Environmental Services/MART Technologies, Vineland, NJ and hazardous, TSCA regulated waste to Chemical Waste Management landfill in Model City, New York.

Transportation of PCB-containing soil will comply with applicable federal and state regulations. Excavated soil classified as TSCA regulated hazardous waste shall be transported with special placards required by DOT for placement on the licensed hazardous waste transportation vehicles.

6.2 Disposal Requirements

Soil disposal activities must meet the requirements of both Middlesex County and the selected disposal facility. These requirements are described in the following subsections.

6.2.1 Disposal Facility Requirements

Oxford has contacted each facility in order to identify the specific requirements for waste acceptance as described below.

- Maximum Allowable Chemical Concentrations
  The maximum acceptable PCB soil concentration for Chemical Waste Management Landfill is less than 500 ppm and for Casie Protank Ecological and Environmental Services/MART Technologies it is less than 50 ppm. The existing sampling data indicate that PCB concentrations fall below the accepted limits for both facilities.

- Waste Characterization
  In the event that the existing soil sampling data is deemed insufficient, additional waste characterization samples may be collected based on the disposal facility requirements. Waste profiles and supporting documentation will be submitted to EPA for review prior to the submission to the proposed disposal facility.

- Facility Forms
  Waste profiles and non-hazardous waste certification sheets are required by each facility. Oxford will complete these forms. Sample waste manifests shall be submitted to USEPA for review at least five (5) days prior to shipment.

- Transportation Permits
  The hauler requirements are specific to each state. Each hauler must have the appropriate permit for the state of the destination landfill or treatment facility.

6.3 Disposal Notifications

DSC will notify the USEPA at least five (5) days prior to the shipment of the PCB containing soil to the designated landfill. In addition, at least five (5) working days prior to out-of-state waste shipments, DSC will notify the environmental agency of the receiving state, if necessary, of the following: (a) the name and location of the facility to which the wastes are to be shipped; (b) the type and quantity of waste to be shipped; (c) the expected schedule for the waste shipments; (d) the method of transportation and name of transporter; and (e) treatment and/or disposal method of the waste streams.

7.0 PERMITS, APPROVALS AND SITE ACCESS

7.1 Permits and Approvals

All activities required of DSC under the terms of the AOC will be performed only by qualified persons possessing all necessary permits, licenses, and other authorizations required by federal, state and local governments, and all work conducted pursuant to the AOC will be performed in accordance with prevailing professional standards.

All hazardous substances, pollutants, or contaminants removed from the Property pursuant to the AOC for off-Site treatment, storage, or disposal will be treated, stored, or disposed of in compliance with (a) Section 121 (d)(3) of CERCLA, 42 U.S.C. §9621(d)(3) (b) Section 300.440 of the NCP, (c) RCRA, (d) the Toxic Substances Control Act ("TSCA"), 15 U.S.C. §2601, et seq., and (f) all other applicable federal and state requirements. However, as specified in the AOC pursuant to CERCLA and the NCP, no permit shall be required for any portion of the work that is conducted entirely on this Property.

If hazardous substances from the Property are to be shipped outside of the State of New Jersey, DSC will provide prior notification of such out-of-state waste shipments in accordance with OSWER Directive 9330.2-07. DSC will assure that the receiving facility of any waste from the Property possesses the appropriate environmental permits and/or approvals. Transportation of waste off-site will comply with federal and state labeling, packaging and transportation requirements.

7.2 Property Access

DSC has obtained access agreements from the owner of 126 Spicer Avenue to conduct the work specified in the AOC. A copy of this agreement is provided in Appendix D. It is not anticipated during implementation of the Work Plan that soil removal actions will require short- or long-term use of adjoining residential private property owned by parties other than the Property owner, or that the soil removal action at this Property will include actions that might restrict access to or use of adjoining private residential property. It is possible that access to public property (i.e. streets and/or sidewalks) may need to be restricted in order to implement portions of this Work Plan. DSC and its contractors will use best efforts to obtain access to any affected private or public property(s) prior to implementation of this Work Plan.

USEPA, NJDEP and their designated representatives, including, but not limited to, employees, agents, contractor(s) and consultant(s) thereof, will be permitted to observed the Work carried out pursuant to the AOC. DSC will at all times permit, USEPA, NJDEP, and their designated representatives full access to and freedom of movement at the Property and any other premises where work under the AOC is to be performed for purposes of inspecting or observing DSC's progress in implementing the requirements of the AOC, verifying the information submitted to USEPA by DSC, conducting investigations

relating to contamination at the Property, or for any other purpose USEPA determines to be reasonably related to USEPA oversight of the implementation of the AOC.

8.0 QUALITY ASSURANCE/QUALITY CONTROL PLAN

8.1 Purpose

A QAPP has been prepared in accordance with the following guidance documents for all sample collection and analysis activities conducted pursuant to the AOC: USEPA SW-846; *Guidance for Preparation of Combined Work/Quality Assurance Project Plans for Environmental Monitoring,* USEPA, May, 1984; *National Enforcement Investigations Center Policies and Procedures Manual,* May 1978, revised August, 1991; and the *National Enforcement Investigations Center Manual for the Evidence Audit,* September, 1981. The QAPP is provided as Appendix A to this work plan.

The purpose of the QAPP is to summarize the standard procedures and methods for sample collection and analysis to be followed during implementation of removal action activities. This will ensure that the results are of sufficient quality and can be used to (1) reliably indicate the presence or absence of PCBs; and (2) reliably determine the extent of soil removal required in order to remediate the site in accordance with the criterion specified in the AOC.

Standard quality assurance/quality control (QA/QC) protocols will be followed during this sampling program to ensure that the results of this sampling are of sufficient quality and can be used to reliably indicate the presence or absence of constituents. QA/QC protocols to be utilized for this program are equivalent to those provided in the guidance documents described above. The evaluation of data will involve the collection of QC samples in accordance with the sampling and analysis protocols. The QA/QC protocols will also include the systematic validation of the analytic data and the management of the analytic data in electronic format. A description of the general QA/QC program to be implemented under this program is provided in Appendix A with project-specific requirements discussed below. Standard sampling and sample management procedures, as described in Section 3.

8.2 Remedial Action Objectives and Data Usage

The purpose of this removal action is to characterize and remove designated PCB-containing soils on each Property as specified in the Work Plan. The scope of removal action activities is described in Section 4 of this Work Plan. The data collected from these activities will be used to assess the nature and extent of PCB-containing soils and to confirm delineation of soil removal areas. Samples will be collected on each Property as required to support the removal action objectives indicated above. Sample collection parameters (i.e. frequency, quantity, type, location) and analytic specifications (i.e. analytic method, parameter table) for samples collected as part of this removal action are described in Sections 3 and 4.

8.3 Quality Control Field Samples

8.3.1 Contamination Control Samples (Equipment Rinsates and Trip Blanks)

Equipment rinsates are used to confirm that the sample bottle, sampling device, and the sampling procedure are not contaminating the sample. Contaminant-free water is transported to the sampling point, poured over or through the sample collection device, collected in a sample container, preserved, and returned to the laboratory for analysis. Due to the use of dedicated stainless steel spoons per sample location, Oxford will not collect field equipment rinsate blanks.

A trip blank for volatile organic compounds (VOCs) analysis consists of a contaminant-free matrix in the appropriate sample container with preservative. This sample is generated by the container preparer, transported to the field (staying with the sample containers continually), and returned without being opened. The trip blank provides a measure of potential positive interferences introduced by sample preservation, transportation, storage, and analysis. Since analysis for VOCs is not part of this sampling program, trip blanks will not be required.

8.3.2 Precision Control Samples (Field Duplicate Samples)

Analysis of duplicate samples provides information concerning the precision of the sampling and analytic processes. Two samples are collected in the field at the same location so that they represent the sample matrix as closely as possible. The results obtained from the measurement of field duplicate samples reflect the total precision of the sampling and analytic procedures and the variability in obtaining samples that are intended to represent one sampling point. Oxford will collect one field duplicate sample for every 20 soil samples collected. Duplicate samples will be analyzed for all parameters for which the corresponding sample pairs are analyzed.

8.4 Quality Control Laboratory Samples

8.4.1 Contamination Control Samples (Method Blanks)

For each batch of samples processed, method blanks (using ASTM Type I to IV water and reagents) are carried throughout the sample preparation and analytic processes. These blanks are used to assess whether samples are being contaminated in the laboratory. Method blanks are specific for each analytical method and for each batch of 20 or fewer samples.

8.4.2 Accuracy and Precision Control Samples (Matrix Spike Samples)

A matrix spike and a matrix spike duplicate sample are created when the analyst adds a known amount of an analyte of interest into a portion of an environmental sample. The data from a matrix spike provide information on the matrix effects of a particular sample. OXFORD will collect one matrix spike sample and duplicate for every 20 soil samples

collected. Matrix spike samples will be analyzed for all parameters for which the corresponding sample pairs are analyzed for.

8.5 Data Validation and Usability Review

Oxford will subject all analytic data to data validation and review of usability, including an evaluation of data quality parameters, false negatives, and detection limits. The primary purpose of the validation and review will be to determine if any qualitative and quantitative problems are evident from the laboratory QA/QC data, not to verify whether the laboratory reported QA/QC information is correct. Specific performance criteria to be used for this review will follow the procedures specified in Appendix A.

In addition to the general validation process described in Appendix A, all analytical data will be subject to data validation using criteria set forth in *USEPA Region II Standard Operating Procedures HW-23 Revision 0* appropriate for PCB-only analyses. The primary purpose of this review is to determine if any quantitative problems are evident from the laboratory QA/QC data, not to verify whether the laboratory reported QA/QC information is correct. Specific performance criteria to be used for this review will follow the respective analytic method.

8.6 Data Management

All analytical data generated during this investigation will be formatted into a usable medium, such as a computer data base program. The data base will contain the analytical results received from the laboratory such as the sample identifier, the analytic parameter, the reported result and any necessary qualifier, the method detection limit and any qualifier associated with it, and the measurement units. It will also contain additional information on the sampling date, the sample medium, the sampling method, and the types of analyses to be performed on the sample. This database will allow the generation of summary tables, graphs, and figures. It will also maintain the integrity and accountability of the original data.

8.7 Approach to QAPP Implementation

This section provides the approach taken by the project team to meet regulatory and client requirements. It outlines and provides details of the requirements for (1) organizational structure, functional responsibilities, levels of authority, and lines of communication; (2) training of personnel responsible for performance of work activities affecting quality; and (3) procurement requirements.

8.7.1 Organization and Responsibilities

The organizational structure of the project team, functional responsibilities, levels of authority, and lines of communication are described below. The individuals comprising the project team will be identified for removal action activities by DSC and Oxford.

Project Coordinator: *Timothy Francisco*
The project coordinator reports to DSC and will serve as project director and overall technical reviewer of project deliverables. The project coordinator's responsibilities include review of work plans, schedules, costs, technical performance, and coordination of project activities with the project manager to achieve the objectives of the removal action and communication with both DSC personnel and relevant regulatory agencies.

Project Manager: *Joy Lee*
Project managers report to the program coordinator and will be responsible for certain portions of the Work Plan activities, such as the organization, coordination, and supervision of various project activities and the associated field work. Their responsibilities include communications with DSC and regulatory agency personnel, supervision of subcontractors, participation in report preparation and technical review, and tracking of schedules and budgets. Each project manager is responsible for ensuring conformance with standard operating procedures, including the overall quality of field and office activities. Project managers will oversee all aspects of project data collection and reporting, and development of this Work Plan, including data collection and reporting requirements that are consistent with the requirements specified in the AOC.

Field Staff: *Garry Gutshteyn, Bill Bilgeshouse*
Field staff report directly to the project managers and are responsible for assisting the project managers with the organization, coordination, and supervision of the various field tasks, including oversight of subcontractors.

Project Quality Assurance Manager: *Robert Cerone*
The project quality assurance manager reports directly to the project managers and is responsible for implementing the QAPPand addressing all matters relating to the Quality Assurance/Quality Control (QA/QC) needs of the removal action. In addition, the project quality assurance manager conducts audits to ensure that work activities comply with this QAPP.

Site Health and Safety Officer: *Joe Arcoleo*
The site health and safety officer reports directly to the project coordinator and project manager and is responsible for implementing the HASP.

Field Subcontractors:
Field subcontractors report to the project managers and will consist primarily of waste management subcontractors and material suppliers. Field subcontractors are responsible for documentation of initial Property conditions, excavation and construction activities and restoration of each Property to initial conditions.

Laboratory

The laboratory reports directly to the project quality assurance manager and will be responsible for implementation of appropriate sections of the QAPP and achieving the data quality objectives for analytic work in this investigation.

The organization structure and the responsibility assignments are such that quality is achieved and maintained by those who have been assigned responsibility for performing work, and quality achievement is audited and verified by persons or organizations not directly responsible for performing the work. The organizational responsibilities reflect an integration of the technical, administrative, quality control, and quality assurance functions such that the QA program elements are disseminated throughout the entire organizational structure and are an integral part of daily operations. In situations where organizations such as subcontractors, suppliers, consultants and laboratories are involved in the execution of activities governed by the requirements of this QAPP, the responsibility and authority of such organizations will be clearly established and documented.

8.7.2 Training

Field staff and office personnel performing quality control activities will be trained on the following:

- Objectives of the project;
- The contents of this QAPP;
- The procedures described in the Work Plan;
- Individual job responsibilities and authority.

8.7.3 Procurement Requirements

Procurement of equipment and services will be made in accordance with project standards outlined in the Work Plan, QAPP and HASP to assure that each prospective supplier or subcontractor understands the requirements. Applicable regulatory requirements and other requirements that may be necessary to ensure adequate quality will be included or referenced in the documents for procurement of material, equipment and services.

9.0 HEALTH AND SAFETY PLAN

Oxford Environmental Inc. has prepared a site-specific HASP for the remediation activities to take place at 126 Spicer Avenue. A copy of the HASP is provided in Appendix E. Specific elements of the addressed in the HASP are as follows:

- General site information including site name, address, background, work objectives, names of personnel who will be on-site, and names of key personnel responsible for site safety;
- Potential physical, chemical, and biological hazards;
- A brief hazard evaluation;
- Descriptions of appropriate levels of personal protection and decontamination;
- Air monitoring plan and dust control measures; and
- Emergency services information.

All Oxford site personnel will be required to read and sign the HASP.

10.0 COMMUNITY RELATIONS

DSC will cooperate with USEPA in providing information to the public relating to the work required by the AOC. As requested by USEPA, DSC will participate in the preparation of all appropriate information disseminated to the public; participate in public meetings which may be held or sponsored by USEPA to explain activities at this Property; and provide a suitable location for public meetings, as needed.

All documents submitted to USEPA in the course of implementing the AOC will be available to the public unless identified as confidential by DSC pursuant to 40 CFR Part 2, Subpart B, and determined by USEPA to merit treatment as confidential business information in accordance with applicable law. In addition, USEPA may release all such documents to NJDEP, and NJDEP may make those documents available to the public unless DSC conforms with applicable state law and regulations regarding confidentiality. DSC will not assert a claim of confidentiality regarding any monitoring or hydrogeologic data, any information specified under Section 104(e)(7)(F) of CERCLA, or any other chemical, scientific or engineering data relating to the Work performed hereunder.

A copy of the removal action schedule and an information sheet will be distributed to the resident of this Property prior to implementation of this Work Plan. The information sheet will provide the following information:

- Identify the project manager, contractors, subcontractors and other personnel (e.g. USEPA representatives) authorized to access restricted work areas;
- Describe site preparation procedures to be taken on this Property prior to excavation and restoration work;
- Describe the excavation and restoration procedures;
- Identify potential hazards and describe security measures to mitigate these hazards;
- Describe the proposed restoration plan.

11.0 WORK PLAN IMPLEMENTATION

11.1 Project Schedule

The proposed project schedule has been developed for implementation of the activities described in this Work Plan in accordance with the requirements of the AOC. The project schedule is provided in Appendix F.

11.2 Coordination of Work

Upon submittal of this plan, Oxford will solicit and prepare request for proposals from qualified subcontractors (if any), evaluate bids, and recommend to DSC the issuance of contract awards. The EPA will be notified of proposed subcontractors

Upon approval of this Work Plan, the schedule of activities identified in Appendix F will be implemented. Oxford will notify the property owner, coordinate property access for field mobilization, and notify the EPA at least five (5) days prior to commencement.

11.3 Reporting

As required by the AOC, written progress reports will be provided to USEPA every two (2) weeks which details field activities implemented. Any changes in scope or schedule will be identified in the progress report, include updated information. Within thirty (30) days, a Final Report will be prepared and submitted for EPA approval summarizing all field activities, and validated sampling results.

APPENDICES

Appendix A: Quality Assurance Project Plan (QAPP)

Appendix B: Health and Safety Plan (HASP)

Appendix C: Treatment and Disposal Facility Information

Appendix D: Property Access Agreements

Appendix E: Property Restoration Plan

Appendix F: Project Schedule

Appendix A: Quality Assurance Project Plan (QAPP)

Appendix B: Health and Safety Plan (HASP)

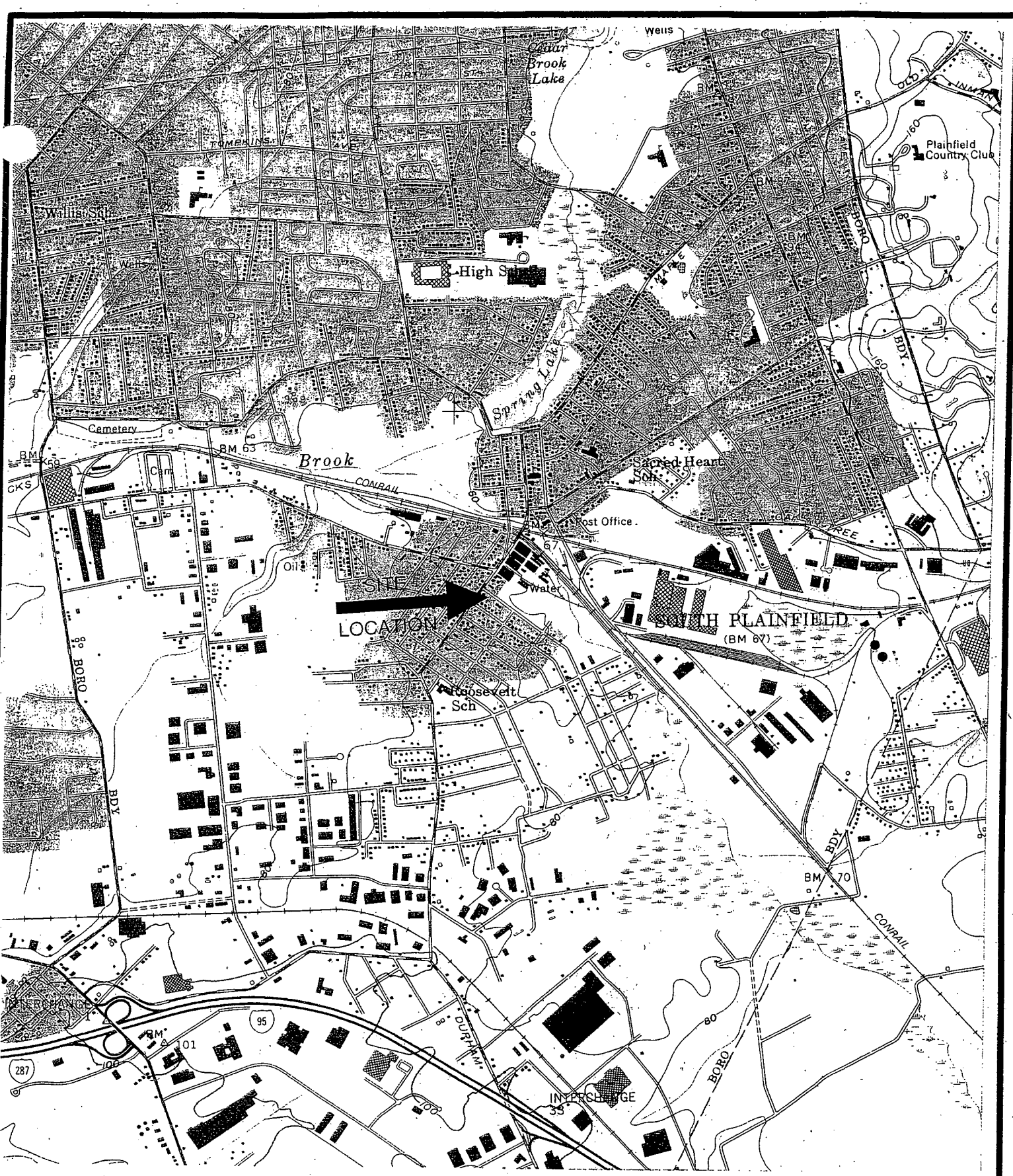
Appendix C: Treatment and Disposal Facility Information

Appendix D: Property Access Agreements

Appendix E: Property Restoration Plan

Appendix F: Project Schedule

FIGURES



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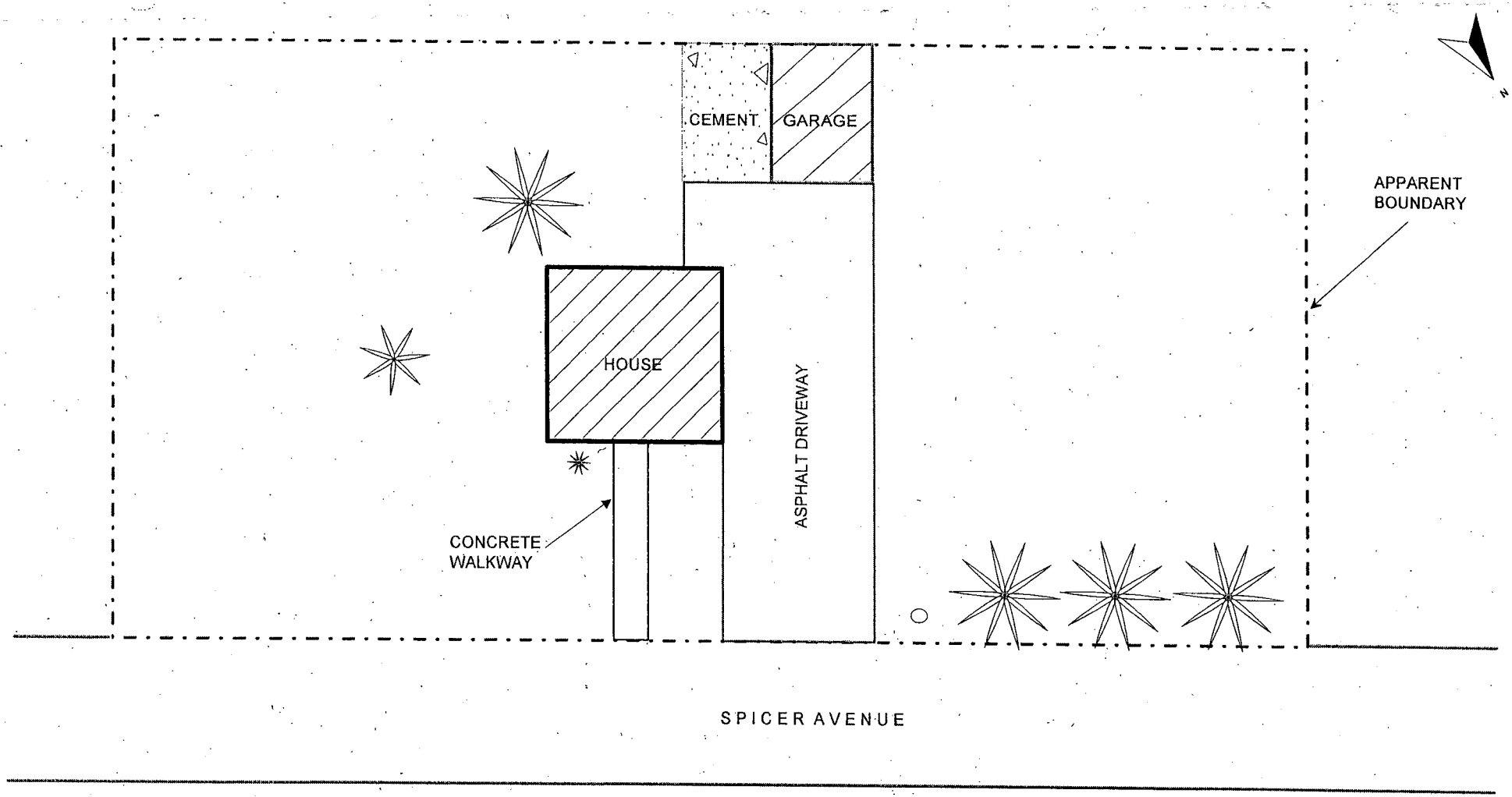
CORNELL-DUBILIER ELECTRONICS SUPERFUND SITE
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY

126 SPICER AVENUE
REMOVAL ACTION WORK PLAN

FIGURE 1
SITE LOCATION MAP



LEGEND

VEGETATION

0 12.5 25 50

SCALE

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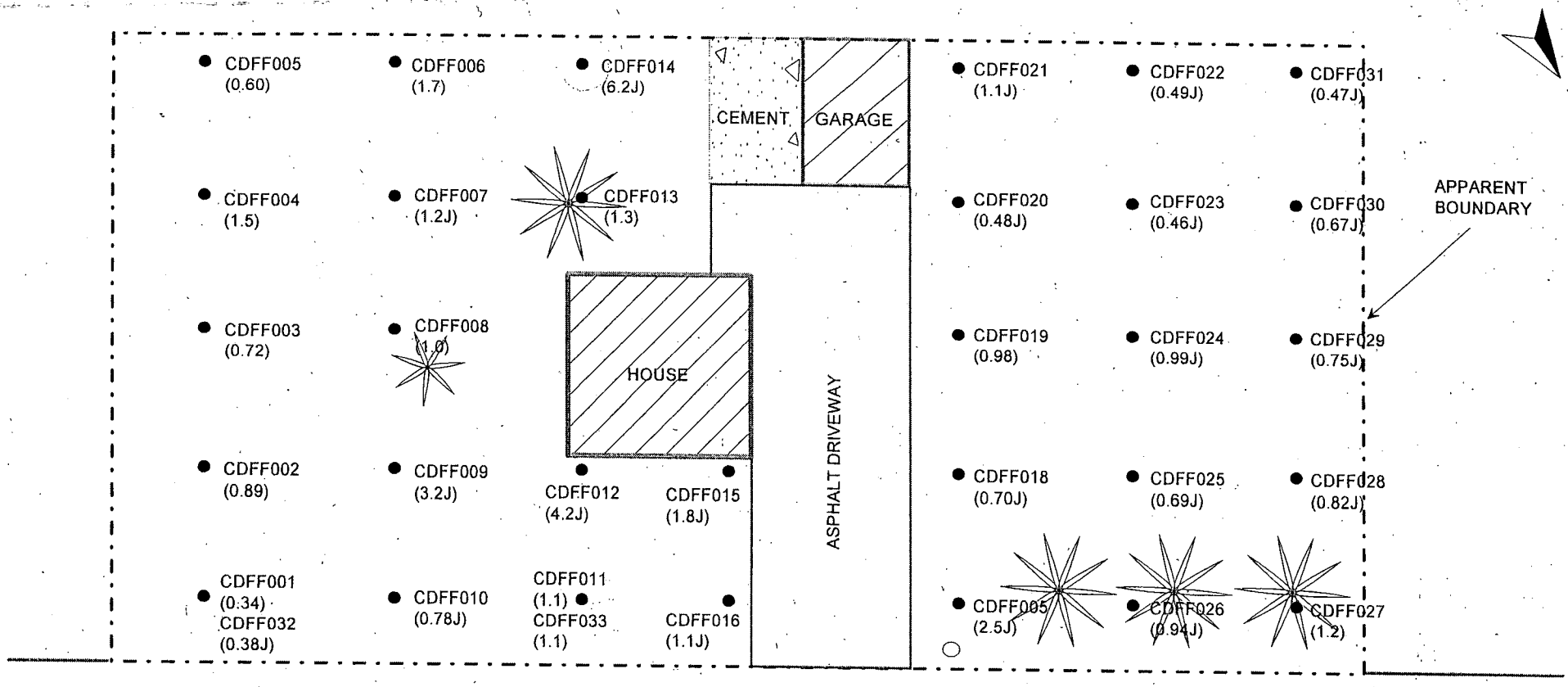
43 ROUTE 46 EAST, PINE BROOK, NEW JERSEY 07058

FIGURE 2 - SITE PLAN

126 SPICER AVENUE
SOUHT PLAINFIELD, NEW JERSEY

REMOVAL ACTION WORK PLAN
IN ACCORDANCE WITH USEPA ADMISNITRATIVE ORDER
ON CONSENT CERCLA 02-2000-2005

CORNELL-DUBILIER ELECTRONICS SUPERFUND SITE
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY



LEGEND

TREE

SOIL SAMPLING LOCATION (PCB CONCENTRATION IN MG/KG)

0 12.5 25 50

SCALE

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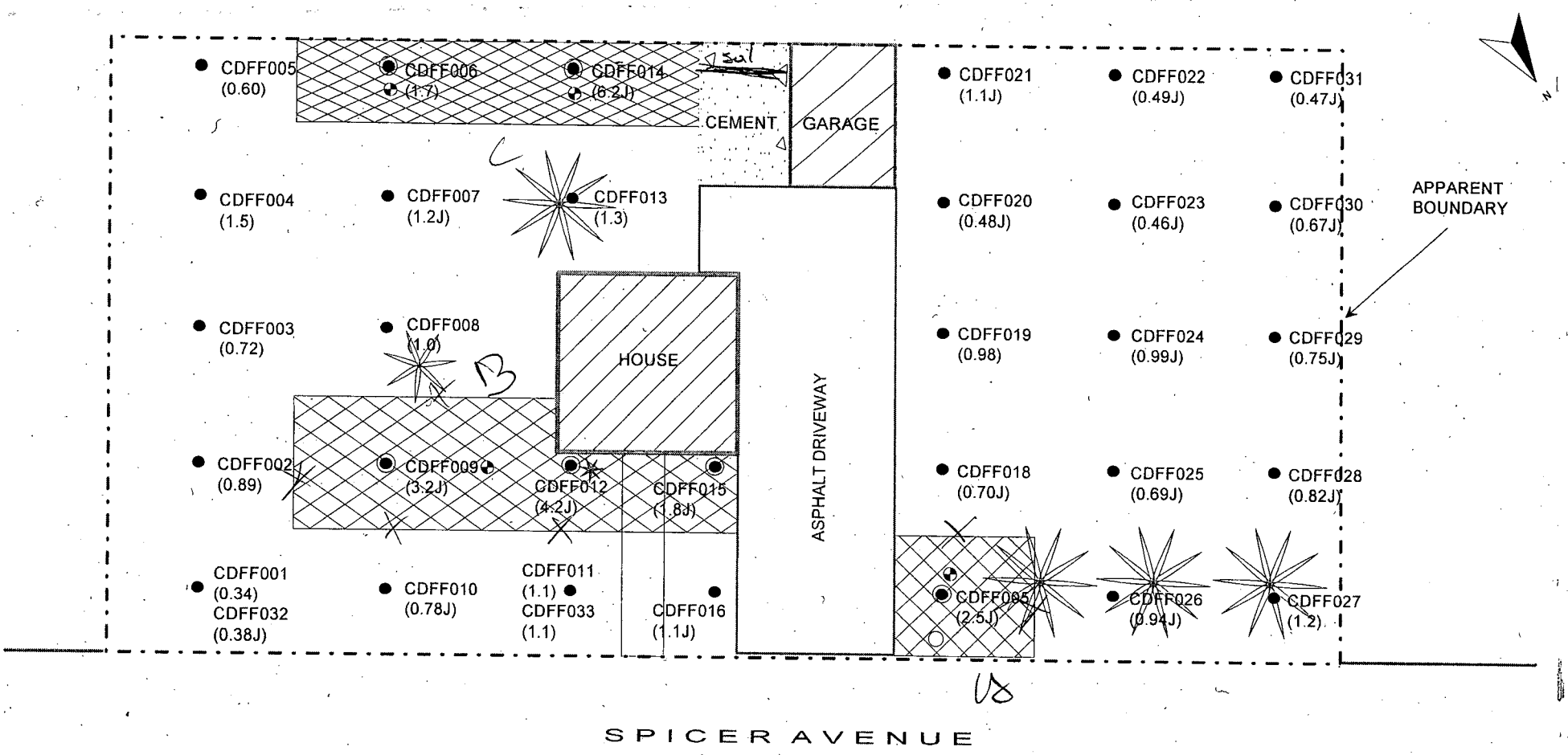
FIGURE 3
US EPA SOIL SAMPLE LOCATIONS AND TOTAL PCB RESULTS (NOV. 1998)

126 SPICER AVENUE
SOUTH PLAINFIELD, NEW JERSEY

REMOVAL ACTION WORK PLAN
IN ACCORDANCE WITH USEPA ADMINISTRATIVE ORDER ON CONSENT CERCLA 02-2000-2005

CORNELL-DUBILIER ELECTRONICS SUPERFUND SITE
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY



LEGEND

- ● SOIL SAMPLING LOCATION (PCB CONCENTRATION IN MG/KG)
- ◉ SAMPLES DESIGNATED FOR EXCAVATION & REMOVAL
- ◒ PROPOSED SOIL SAMPLING LOCATION FOR DELINEATION
- TREE
- PROPOSED EXCAVATION AREAS

0 12.5 25 50

SCALE

OXFORD ENVIRONMENTAL, INC.

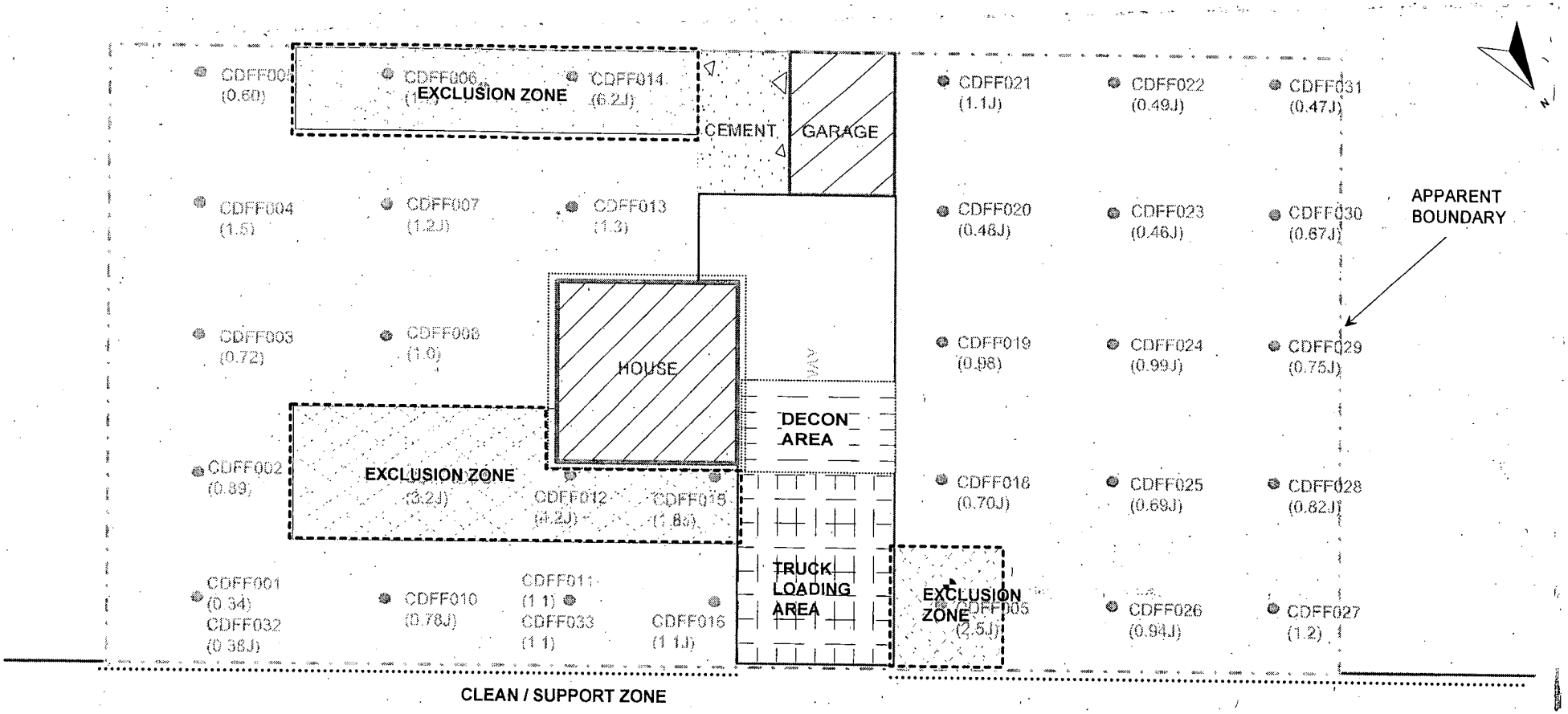
43 ROUTE 46 EAST; PINE BROOK, NEW JERSEY 07058

FIGURE 4
PROPOSED VERTICAL DELINEATION SAMPLE LOCATIONS & EXCAVATION AREAS

126 SPICER AVENUE
SOUTH PLAINFIELD, NEW JERSEY

REMOVAL ACTION WORK PLAN
IN ACCORDANCE WITH USEPA ADMINISTRATIVE ORDER
ON CONSENT CERCLA 02-2000-2005

CORNELL-DUBILIER ELECTRONICS SUPERFUND SITE
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY



LEGEND

PROPOSED SOIL EXCAVATION AREAS

PROPOSED SOIL STAGING AREA

PROPOSED PERSONNEL AREA & TRUCK DECON PAD

BOUNDARY OF EXCLUSION ZONE (SAFETY FENCING)

BOUNDARY OF DECON ZONE (CAUTION TAPE)

0 12.5 25 50

SCALE

OXFORD ENVIRONMENTAL, INC.
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FIGURE 5
PROPOSED WORK ZONES

REMOVAL ACTION WORK PLAN
IN ACCORDANCE WITH USEPA ADMINISTRATIVE ORDER
ON CONSENT CERCLA 02-2000-2005

126 SPICER AVENUE
SOUTH PLAINFIELD, NEW JERSEY

CORNELL-DUBILIER ELECTRONICS SUPERFUND SITE
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY

APPENDIX A

APPENDIX A
Quality Assurance / Quality Control Procedures

TABLES

1.0 INTRODUCTION

Quality assurance/quality control protocols should be followed during all sampling programs defined in site-specific Work Plan to ensure that the results of this sampling are of sufficient quality to meet the data quality objectives for the given project. The evaluation of data will generally involve the collection of QC samples in accordance with the sampling and analysis protocols. QC procedures for measurements not involving the collection of samples are limited to checking the reproducibility of the measurement in the field by obtaining multiple readings. The QA/QC protocols will also include the systematic validation of the analytical data and the management of the analytical data in electronic format.

2.0 INTERNAL QUALITY CONTROL

2.1 Calibration Procedures

This section provides the requirements for calibration of measuring and test equipment and instruments. The procedures are designed to ensure that all laboratory and field equipment and instrumentation are calibrated to operate within manufacturers' specifications and that the required traceability, sensitivity and precision of the equipment/instruments are maintained. Laboratory equipment will be calibrated according to the requested analytical method guidelines ad the Laboratory QA/QC Plan.

Measuring and testing equipment will be calibrated against certified equipment having known valid relationships to nationally recognized standards and will be calibrated, adjusted and maintained at prescribed intervals or prior to use. Documented procedures will be used for calibrating or performing field checks on equipment. Whenever possible, widely accepted procedures such as those published by the USEPA, American National Standards Institute (ANSI), and the American Society for Testing Materials (ASTM), or procedures provided by the manufacturers, will be adopted.

Calibration and maintenance of field equipment will be in accordance with manufacturers' specifications or applicable test specifications, and will be documented. The method and interval of calibration for each item will be defined based on the type of equipment, stability characteristics, required accuracy, intended use, and other conditions that affect measurement control. When measuring and test equipment are found to be out of calibration, an evaluation will be made and documented of the validity of previous results obtained. Devices that are out of calibration will be tagged and segregated and will not be used until they have been recalibrated. If equipment is found consistently to be out of calibration, it will be replaced or repaired. A calibration will also be performed when the accuracy is suspect. Equipment will be handled and stored properly to maintain accuracy.

2.2 Quality Control Samples

Internal quality control includes contamination control samples (equipment, method, and trip blanks), precision control samples (field and laboratory duplicated), and accuracy control samples (spiked samples). A detailed listing of the types of quality assurance samples and the frequency of sampling is presented in Table A.2.1.

2.2.1 Contamination Control Samples (Equipment Rinsates and Trip Blanks)

Equipment rinsates are used to confirm that the sample bottle, sampling device, and the sampling procedures are not contaminating the sample. Contaminant-free water is transported to the sampling point, poured over or through the sample collection device, collected in a sample container, preserved, and returned to the laboratory for analysis.

2.2.2 Precision Control Samples (Field Duplicate Samples)

Analysis of duplicate samples provides information concerning the precision of the sampling and analytical processes. Two or more samples are taken in the field so that they represent the sample matrix as closely as possible. The results obtained from the measurement of field replicated samples reflect the total precision of the sampling and analytical procedures and the variability in obtaining samples that supposedly represent one sampling point.

2.2.3 Accuracy Control (Field Spiked Samples)

A field spiking program will not be implemented unless a specific need arises that cannot be rectified by laboratory quality control or blind QA/QC samples.

2.3 Laboratory Quality Controls

2.3.1 Contamination Control Samples (Method Blanks)

For each batch of samples processed, method blanks (using ASTM Type I to IV water and reagents) are carried throughout the sample preparation and analytical processes. These blanks are used to assess whether samples are being contaminated in the laboratory. Method blanks are specific for each analytical method, and each batch of 20 or fewer samples.

2.3.2 Accuracy and Precision Control Samples (Matrix Spike, Matrix Spike Duplicate, Laboratory Control, Laboratory Duplicate, and Surrogate Spiked Samples)

A matrix spike and matrix spike duplicate sample are created when the analyst adds a known amount of an analyte of interest into a portion of an environmental sample. The date from a matrix spike proved information on the matrix effects of a particular sample. The acceptance for the results of analysis of spiked samples are the limits of recovery defined in the USEPA methods identified in the site-specific Work Plan.

Laboratory control samples (LCS) represent laboratory control matrix spikes in which a consistent matrix is spiked with a known analyte level in the normal analytical range. The purpose of the control sample is to check the precision and accuracy of the method and the laboratory procedures. The results of a control sample analysis must fall within ±3 standard deviations (control limits) of the average recovered concentrations. (A control sample must be analyzed and yield results within standard control limits before samples can be analyzed.)

A laboratory duplicate consist of a duplicate sample analysis performed for inorganics by the laboratory. The percent difference data generated by these analyses are used to

indicated the precision of the sample results and evaluate the long-term precision of the methods within the confines of the sample matrix.

A surrogate spike sample is created when measured amounts of certain compounds are added before sample preparation or extraction (except for volatile samples, which are spiked prior to analysis). The analyst measures the recovery of the surrogate to determine systematic extraction or analysis problems. Surrogate spike recoveries should fall within the control limits specified in the prescribed USEPA methods identified in the Work Plan. Dilution of samples to bring the analyte concentration into the linear range of calibration may dilute the surrogates outside of the quantification limit; assessment of the analytical quality in these cases will be based on the quality control results from the other spiked samples.

TABLE A.2-1
Frequency of Analysis of Quality Assurance Samples

QA Sample Type	Frequency of Analysis
Contamination Control Samples	
Laboratory Method Blank	One per each analytical method. One in every batch of samples (not to exceed 20 samples).
Trip Blank	One per cooler if VOCs are tested; analyze for VOCs only.
Equipment Rinsate/Field Blank	One per analytical method. One per sampling day/event or one per 20 samples
Accurary Control Samples	
Performance or Blind Check Samples	As needed based on QA/QC review.
Surrogate Spiked Samples	Surrogate will be spiked and analyzed in all samples and in all blanks for GC and GC/MS methods
Matrix Spike Samples	One per 20 samples; performed on field designated samples.
Precision Control Samples	
Field Replicate (Duplicate) Sample	One per each analytical method. One out of every 20 samples
Matrix Spike Duplicate Samples	One per 20 samples; performed on field designated samples.

3.0 DATA REPORTING, ASSESSMENT AND VALIDATION

Collection and ultimate presentation of reliable data is a primary focus of the characterization activities. The effort to ensure reliable data begins prior to data collection as sampling and analysis procedure are evaluation in regard to their ability to generate the appropriate, technically acceptable information required to achieve project objective. This QAPP meets this requirement by establishing objective in terms of quality parameters, analytical methods, and protocols. During and after data collection, results are assessed to assure that the procedures are effective and that the data generated provides sufficient information to achieve project objectives. All data collected during the removal action will be managed, distributed and preserved to substantiate and document that the data are known quality and properly maintained.

3.1 Laboratory Analytical Data Deliverables

The analytical data verification program is primarily designed to ensure that documentation and data are reported using established reporting requirements and that all requested analyses are performed. This process will be completed in accordance with approved procedures. Data assessment and reporting by the laboratory will be performed according to method specifications. The remainder of the data verification program consists of tracking of data delivery and review of the following: sample identification, Chain-of-Custody forms, analytical holding times, requested turnaround time, data results, and data quality parameters.

3.1.1 Data Reporting

The data will be reported in a format that will allow the review and/or validation of samples analyzed under the protocols described in the site-specific Work Plan. The data package will include all the elements required to validate deliverable data. The data package will be prefaced by a Data Summary Report which summarizes the sample and QC results detailed in the complete data package. The Data Summary Report will include all sample tracking information such as title page, sample cross reference, sample analysis request form, field Chain-of-Custody form, and internal Chains-of-Custody delineating internal sample transfer or subcontracted analyses. The complete data package will include all elements of the Data Summary Report plus all relevant data as outlined in Table A.2-2. The laboratory data packages will contain the following items:

- Laboratory name and address;
- Case narrative which includes general comments, a description of the sample types, analyses performed, any sample reanalysis performed, problems encountered, and corrective action results. Specific information regarding quality control results that are outside the control limits or other factors that affect the data use will be discussed. These discussions will include the problem, corrective action, results of corrective action, and effect on the reported results.
- Sample cross reference;
- Completed Chain-of-Custody forms;

- Method reference; and
- Relevant summary forms specified in Table A.2-2.

The form number listed in Tables A.2-2 refer to CLP forms; however, summary forms contained in Chapter ONE of SW-846, Third Edition (Revision 0, 1986) or equivalent may be used.

Delivery of analytical data will be tracked to ensure that the requested laboratory services are performed in an accurate and timely manner. Data delivery is logged manually on the Chain-of-Custody form. After the data reports are received, they are to be reviewed to determine if all contractual format requirements have been met. In addition, data are to be reviewed to confirm that all requested parameters are received. All analytical data will be reviewed by technical personnel familiar with the monitoring program or investigation. Sample data will also be compared with the QA/QC samples collected or analyzed within the same sample lot. The data review will be used to report inconsistencies in concentrations, sampling procedures, and sample identification.

3.1.2 Laboratory Data Review

Prior to submission of analytical data, the analytical laboratory will review the data with respect to the analytical method requirements. The analytical laboratory will review the analytical data and data package to ensure:

- Holding times have not been exceeded;
- Sample preparation information is correct and complete;
- Analysis information is correct and complete;
- The appropriate analytical methods and/or SOPs have been followed;
- Instrument calibration and QC data re within prescribed limits and documented;
- QC samples are within prescribed control limits;
- Any special sample preparation and analytical request have been met;
- Component identification is correct;
- Quantitative results are correct;
- Common laboratory contaminants are identified;
- Unexpected results are noted; and
- Data package is complete and acceptable for transmittal.

All data will be review by someone other than the analyst who generated the data. Any errors that are identified and corrected during the review process should be documented. Clarification of procedures and/or additional training should be implemented to ensure that the errors do not recur. Samples will be reanalyzed as deemed appropriate by the laboratory personnel.

TABLE A2-2
Deliverables Required for Analytical Data Package

Polychlorinated Biphenyls (PCBs) – Method SW8082
QC Summary
Tabulated Target Compound Results for Samples, Methods Blanks and MS/MSDs, (non-spiked compounds) (CLP Form I Pest of equivalent)
Surrogate Percent Recovery Summary (CLP From II Pest or equivalent)
Matrix Spike/Matrix Spike Duplicates Summary (CLP Form III Pest or equivalent)
Method Blank Summary (CLP Form IV Pest or equivalent)
Initial Calibration (CLP Form VI Pest or equivalent)
Final Calibration (CLP Form VII Pest or equivalent)
Surrogate Retention Times (CLP Form VIII Pest or equivalent)
PCB Standards Summary – All Columns (CLP Form IX Pest or equivalent)
PCB Identification – Positive Results Only (CLP Form X Pest or equivalent)
Analytical Sequence Form (CLP Form III Pest or equivalent)
COMPLETE DATA PACKAGE
Sample Data
Chromatogram – All Columns
Data System Printout – All Columns
Manual Work Sheets
GC/MS Configuration Date – Spectra
Standard Data
PCB Standard Chromatograms and Data System Prinouts for all associated Standards
RAW QC Data
Blank Data
Chromatograms and Data System Printouts – All Columns
Matrix Spike/Matrix Spike Duplicates
Chromatograms and Data System Printouts

3.2 Assessment of Field Data

Checking the procedures used and comparing the data to previous measurements will assess Field data collected during the field activities. Field QC samples will be evaluated to ensure that field measurements and sampling protocols have been observed and followed. The following will be assessed:

- Use of standard operating procedures;
- Calibration method and frequency;
- QC lot number;
- Date and time sampled;
- Preservation;
- Samplers;
- Laboratory;
- Chain-of-Custody forms; and
- Date shipped.

The field data will be reported as follows:

- Ground surfaces will be surveyed to 0.01-foot, horizontal coordinates to the nearest 0.1 foot; and
- Sampler blow counts will be rounded to the nearest blow per 6-inch sampling interval

Data obtained from field measurements will be assessed by the field staff. The validity of all data will be determined by checking calibration procedures utilized in the field, and by comparing the data to previous measurements, if any, at the specific site. Large variations (greater than 50 percent) will be examined for possible recollection of data or assignment to a lower level of analytical data quality.

3.3 Data Validation

Data validation is the process of reviewing laboratory records of analytical data and quality-related field data to assess laboratory performance as compared to QC criteria, data quality requirements, procedural requirements. The purpose of validation is to document the quality and usefulness of the data and the documentation developed during the sample analysis; in particular, the purpose of the data validation is to determine if any quantitative problems are evident from the laboratory QA/QC data, not to verify whether the laboratory reported QA/QC information is correct. Specific performance criteria to be used for this review will follow the appropriate Functional Guidelines and USEPA regional guidance. Validation of analytical data will include an evaluation of data quality parameters, false negatives and negatives, and detection limits.

Calculation that interpret and analyze data will be performed in a planned, controlled, and documented manner. Calculation documentation for interpretation and analysis will be provided, such that a technically qualified person may review, understand, verify, and duplicate the calculations without recourse to the originator. Calculations will be legible, complete, and in a form suitable for reproduction, filing and retrieval. Calculations will be identifiable by subject, originator, reviewer, and date. Calculation documentation will include the following:

- Definition of the objective of the interpretation/analysis;
- Definition of inputs and their sources;
- A listing of applicable references;
- Results of literature searches and other background data;
- Identification of assumptions;
- Identification of any computer calculations, including computer type, program name; revision, input, output, evidence of program verification, and the bases of application to the specific problem; and
- Signature and dates of the review and approval by appropriate qualified personnel.

The data validation process consists of reviewing and evaluating the analytical documentation supporting the data resulting from laboratory analyses. The analytical process itself is first evaluated by reviewing the laboratory analytical records to ensure compliance with the procedures governing the analyses. These records may include, but are not limited to, sample custody records, sample preservation logs, instrument printouts, calibration checks, and initial calibration data. Second, the data validation process evaluates the data for precision, accuracy, and completeness by comparing the data to the field blank, duplicate sample, and MS/MSD sample analysis results and the corresponding laboratory QA/QC data.

At a minimum, Oxford will review and qualify 100% of the data packages by reviewing the applicable summary forms (Tables listed in Table A.2-2) and certain raw data for the items listed below. The data packages will be reviewed against performance criteria in the appropriate analytical method and the data quality objectives (DQOs) defined for the given project. All analytical results will be reviewed, and for each analyte (in each matrix) the following items will be assessed as appropriate:

- Surrogate percent recoveries;
- Method blank data;
- BC/MS tuning and mass calibrations;
- Initial calibration summaries;
- Continuing calibration summaries;
- Matrix spike recoveries;
- Matrix spike/matrix spike duplicates;
- Field duplicates;
- Field and trip blanks;
- Identification of outliers; and

- Calculation of overall completeness.

The laboratory results will also be reviewed for:

- Unexpected results;
- Common laboratory contaminants; and
- Unusual spatial concentration/analyte relationships.

If problems are noted in this review, the data packages will be further reviewed to determine if the problem is random or systematic. If systematic problems are noted the analytical laboratory will be contacted immediately. Data is qualified based on the results of this validation.

3.4 Data Qualification

The purpose of the data qualification process is to determine and summarize the quality and reliability of the analytical data and to document any factors which affect the data usability. The data qualification process consists of a review of the laboratory and field data. Qualification will be performed by Oxford. The data will be qualified as "accepted without any qualifications" (no flags), "accepted with noted qualifications" (flagged with a "J" or "UJ", or "unusable"(rejected, flagged with an "R") based upon the review process. Oxford will determine if "rejected" results are critical to the program and resampling and reanalysis is required. Information used in the qualification process will include:

- Chain-of-Custody documents;
- Laboratory data packages;
- Information from the sampling team on field conditions and field QC samples;
- Sampling location;
- List of all field samples obtained; and
- This QAPP.

4.0 DATA MANAGEMENT AND RESULTS REPORTING

4.1 Data Management

Environmental data will be prepared and maintained an electronic file. Sample identification will remain consistent with those explained in Section 3.4.4 of the Removal Action Workplan.

4.2 Data Reporting

All data reports resulting from the implementation of a site-specific Work Plan should consist of a presentation of the raw analytical data, summaries of the validation and verification effort, as well as interpretative efforts relative to the data.

5.0 PERFORMANCE AND SYSTEM AUDITS

5.1 Performance and System Audit Procedures

This section provides requirements for the planning, scheduling and conducting of audits and surveillance to verify that site activities are being performed efficiently in conformance with approved plans, standards, federal and state regulatory requirements, sound scientific practices, and contract requirements. Planned and scheduled audits will be performed to verify compliance with aspects of the QA program and to evaluate its effectiveness. Audits will include an objective examination of work areas, activities, processes, review of documents and records, interviews with project personnel, and review of plans and standards.

Performance and system audits area key mechanism for ensuring technical and procedural compliance with the Work Plan. The purpose of the audits are:

- To verify that the field and laboratory QA procedures documented in htie QAPP are properly followed and executed;
- To check that appropriate documents are properly completed and are kept current and orderly;
- To ensure that measurements systems are accurate; and
- To identify nonconformance or deficiencies and to initiate necessary corrective actions.

The project managers and the project QA manger are responsible for assuring conformance with standard operating procedures. At least on field audit will be performed. Laboratories should conduct monthly or bimonthly internal audits.

Activities that have been selected for audit will be evaluated against specified requirements, which will include an evaluation as necessary to evaluate whether the QA program is effective and properly implemented. Reports and recommendation s must be prepared on all audits and submitted to the QA manager for retention in the project files.

5.1.1 Review of Sampling Program

As field documentation is generated, it will be reviewed by the project manager for accuracy, completeness, and compliance with the QAPP requirements. Field sampling procedures will be audited periodically by the program manager for compliance with QAPP procedures. The audit will check that:

- Sample protocols are followed;
- Field measurements are done correctly;
- Field documentation is completed;

- Samples are placed in proper containers;
- Samples are stored and transported properly; and
- Sample custody procedures are followed.

5.1.2 Review of Laboratory Procedures and Analytical Results

Laboratory procedures are reviewed by the laboratory's QA officer whenever a beyond control limit situation is found. Analytical results are checked by the laboratory manager or other client services individuals prior to final distribution.

5.1.3 Technical Review

Technical review of various disciplines (e.g. construction, engineering) will be provided by the appropriate technical managers through periodic peer reviews. Technical reviews will be conducted at various phases of the tasks. These reviews are intended to assure the technical feasibility, accuracy, thoroughness, and soundness of the work performed by the technical staff.

5.1.4 Management Review

The program manager or disignated manger will review the execution of the quality assurnace program on a regular basis. The review may include training of personnel, manpower commitments and proper coordination of efforts and schedules.

5.2 Preventative Maintenance

A preventative maintenance program will, at a minimum, be established for equipment and systems that would otherwise be subject to breakdown, when the breakdown could lead to safety hazards, waste release, or significant loss of completeness and accuracy in data. The preventative maintenance schedule will be developed based on the appropriate manufacturer's recommendations.

Laboratory analytical instruments will be subject to regular preventative maintenance by laboratory personnel or representatives of the equipment manufacturer. Daily checks of each instrument will be made by the analyst who has been assigned responsibility for that instrument. This will include activities such as changing GC inlet liners, checking operation of data systems, checking for leaks, and other similar procedures recommended by the equipment manufacturer.

Field instruments will be checked daily and prior to use by the person responsible for use of each instrument. Instrumens will be calibrated in the field on a daily basis during project implementation as described in Section 2 and maintained in accordance with manufacturer's instructions. Maintenance and performance logs will be maintained for all equipment and instruments and should include:

- Name of the equipmetn and manufacturer;
- Model and serial number;

- Date equipment placed into service;
- Instruction s for proper maintenance/performance checks and the name of the person performing; and
- Nature, cause and name of person performing repairs due to malfuntions.

5.3 Corrective Action Procedures

The need for corrective action may be identified by system or performance audits or by standard QA procedures. In addition, all technical staff will be responsible for reporting questionable technical or quality control nonconformances to the appropriate QA officer. When a noncorformance or deficiency is identified, corrective action will be implemented by the project QA manager. The corrective action process will involve the following:

- Reviewing quetionable data with respect to predetermined limits for data acceptability;
- Identifying and defining problems for which corrective action is required;
- Assigning responsibility for investigation the problem
- Determining disposition or action taken (this may include reanalysis, resampling and analysis, remeasurement of field data);
- Assigning and accepting responsibility for implementing the corrective action;
- Evaluating the disposition of corrected action results; and
- Documenting the correction action taken and results.

For each measurement system, the project QA manager will be responsible for initiatin the corrective action. The laboratory supervisor will be responsible for implementing corrective action in the laboratory, and the on-site field manager will be responsible for implementing corrective action in the field. The corrective action taken will depend on the QA/QC data that did not meet the necessary criteria, and may range from qualifying the data to resampling at the site. The program manager will be responsible for ensuring that the corrective action has indeed been taken and that it adequately addresses the nonconformance.

The project QA manager is authorized to stop work until an unsatisfactory condition has been corrected. In this case, the project QA manager is responsible for verifying that the unsatisfactory condition has been resolved and for authorizing work resumptions.

5.4 Quality Assurance Reports

The project quality assurance manager or designee will review aspects of the implementation of the program following each round of sampling and at the conclusion of the project and submit a summary report to the program manager. These reviews will include an evaluation of the data quality assessment activities, the results of audits and surveillances (as appropriate), and an assessment of the status of nonconformances and corrective actions. The final project report will also include a

separate QA section that will summarize the overall data assessment and validation in accordance with the data quality objectives outlined in the QAPP.

Significant nonconformance or quality problems will be reported to the principal for evaluation and possible management action. Examples of significant nonconformance or quality problems include the following:

- Failure of an organization to establish and implement appropriate QA and technical requirements, plans and procedures.
- Continuous or repetitive program inadequacies, deviations or noncompliances and failure of appropriate organizations to provide proper direction, overview, or corrections.
- Failure of project organizations to take reasonable prompt and effective actions to correct deficiencies.

Comprehensive records will be maintained to provide evidence of the quality assurance activities. The program manager will be responsible for ensuring that quality assurance records are properly stored and that they can be retrieved.

APPENDIX B

APPENDIX B
Health & Safety Plan

ATTACHMENTS

TABLE

FIGURE

1.0 INTRODUCTION

This Health and Safety Plan (HASP) outlines the procedures to be followed by personnel implementing a removal action at 126 Spicer Avenue located in South Plainfield, New Jersey. This removal action includes the excavation, removal and transportation of polychlorinated biphenyl (PCB) contaminated soils.

This HASP has been developed in accordance with the requirements of the Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120) and the United States Environmental Protection Agency (USEPA) Standard Operating Safety Guidelines (OSWER 1988). This HASP establishes the minimum requirements to maintain safe working conditions at the site.

This document will apply to any Oxford personnel working on this project. All contractors and subcontractors (Contractors) will be required to review site conditions and work to be performed to determine specific safety and health requirements for their personnel. Each Contractor involved in removal action activities at the Site will ultimately be responsible for the safety of its personnel and representatives. An agreement to comply with the requirements of the HASP must be signed by all personnel and visitors prior to entering work areas other than the Support Zone.

2.0 SITE DESCRIPTION

The remedial action work activities will take place at 126 Spicer Avenue located in South Plainfield, New Jersey. This property is located along Spicer Avenue, across from the Hamilton Industrial Park. The residential property is approximately 100' x 200' in size.

3.0 CONTAMINANT CHARACTERIZATION

PCBs are the only contaminants of concern that have been identified at these properties. The PCBs were found in soils, with the highest reported soil concentration on this site was 6.2 mg/kg on the property located at 126 Spicer Avenue.

4.0 ORGANIZATION, QUALIFICATIONS, AND RESPONSIBILITIES

Oxford will provide health and safety oversight for Contractors involved in the project. Personnel working on the job must be qualified to perform the tasks that they are assigned. Contractors will ensure that personnel possess the necessary qualifications consisting of sufficient knowledge gained through experience and training to effectively execute the duties of their position. The Contractor is ultimately responsible for the health and safety of their own employees and representatives. Project personnel will be responsible to review this HASP, or the HASP to be prepared by the Contractor which must meet the minimum requirements set forth in this HASP, and acknowledge their understanding and compliance with its provisions by signing on the approval/signoff sheet found in Attachment 1.

The following table identifies project personnel and the chain-of-command critical to the proper implementation of the project and elements of this HASP. Changes in personnel assignment or function may occur periodically, and shall be reflected in HASP revisions and/or updates as necessary.

Project Function	*Assigned Personnel*	*Contact Info*
Project Coordinator	Timothy Francisco	Office (973) 244-0600 ext. 29 Nextel (973) 332-7023
Health & Safety Officer (HSO)	Joseph Arcoleo, CSP, CHMM	Office (973) 244-0600 ext. 26 Nextel (973) 332-7027
Project Manager	Joy S. Lee	Office (973) 244-0600 ext. 22 Nextel (973) 390-1000
Field Geologist	Garry Gutshteyn	Office (973) 244-0600 ext. 17 Nextel (973) 390-1436
Field Technician & Equipment Operator	Bill Bilgeshouse	Office (973) 244-0600 ext. 21 Nextel (973) 390-1001

5.0 SITE SAFETY AND HEALTH OFFICER

The Site Health and Safety Officer (SHSO) is responsible for implementing the on-site elements of the HASP in the field. The SHSO will review this HASP with personnel working on-site prior to the start of excavation and transport activities. In addition, the SHSO will implement any air monitoring required by this document. Based on the results of the sampling, the SHSO will determine whether the upgrading or downgrading of the personal protection should occur, and will recommend changed to operations and controls in the event that worker or public safety or health is threatened.

6.0 HAZARD ASSESSMENT AND RISK ANALYSIS

6.1 Basic Safety Work Practices

To provide the safest working conditions possible, all site personnel must follow these basic safe work practices:

- Hard hats and sturdy work boots are required at all times in the work areas.
- Safety glasses/goggles/eye protection will be worn at all times.
- Hearing protection will be worn while performing high noise tasks, such as heavy equipment operation.
- Protective gloves are required when handling material that cuts, burns, or contaminates the skin.
- Good housekeeping will be practiced at all times.
- Access to safety and fire-fighting equipment will be kept clear at all times.
- Gasoline or diesel equipment will not be refueled when running.
- Horseplay, fighting, gambling and stealing will not be tolerated.
- No employee, other than the operator, will ride on the trucks, loader or moving equipment unless authorized.
- Immediately report all near incidents, accidents or injuries to your immediate supervisor.
- Report unsafe conditions or practices to your immediate supervisor.
- No one will be permitted to engage in work operations alone.
- Smoking, eating, drinking, and chewing gum or tobacco will not be permitted within work zones.
- Personnel should keep track of weather conditions and wind direction to the extent these could affect potential exposure.
- Personnel should be alert to any abnormal behavior on the part of other workers that might indicate distress, disorientation, or other ill effects.
- Personnel should never ignore symptoms that could indicate potential exposure to chemical contaminants. These should be immediately reported to the site supervisor or the SHSO.

All employees, Contractors, and visitors will comply with all federal, state and local health, safety and environmental rules, regulations and ordinances while working at the properties.

6.2 Physical Hazards

The following chart lists the physical hazards that may be encountered during the excavation and transportation activities. Activities will be performed in compliance with applicable OSHA General Industry (29 CFR 1910) or Construction (29 CFR 1926) standards.

Tasks	Hazard	Preventive Measures
Excavation of PCB Contaminated soils	Heavy Equipment	Complete Task Specific Hazard Analysis* prior to initiation of work
	Open Excavation	Complete Task Specific Hazard Analysis* prior to initiation of work
	Weather	HSO will ensure all workers have necessary clothing for specific weather conditions
	Heat	Not Anticipated Due to Seasonal Weather at Time of Removal.
	Vehicle Operation	Complete Task Specific Hazard Analysis* prior to initiation of work
	Noise	The site HSO will monitor sound levels at the start of project work and at other times to document that sound levels do not exceed 90 dBA or impact noise levels do not exceed 140 dBA.

*Attachment 2 includes guidance form for performing task specific hazard analysis and a completed form for heavy equipment operator.

6.3 Chemical Hazards

PCBs have been identified as the only chemical contaminant of concern associated with the soil excavation. PCBs are a class of industrial chemical that contains 209 individual compounds. PCBs made in the United States were marketed under the trade name Arcolor and were identified by a four-digit numbering code in which the first two digits indicate that the parent molecule is a biphenyl and, for the 1200 series Arcolors, the last two digits indicate the chlorine content by weight. For example, Arcolor 1254 has 54 percent chlorine. Arcolors 1254 and 1260 have been detected in the soils at the six properties subject to this Removal Action.

PCBs are generally clear, colorless to light yellow, viscous liquids or solids with a mild hydrocarbon odor. They have a low vapor pressure thus have a low volatility.

According to ATSDR, chronic (long-term) exposure to PCBs by inhalation in humans has been reported to result in respiratory tract irritation and gastrointestinal effects including anorexia, weight loss, nausea, vomiting, abdominal pain and mild liver effects. Effects on the skin and eyes include chloroacne, skin rashes, and eye irritation.

6.3.1 Worker Chemical Hazard Assessment

- Inhalation:
  PCBs' low volatility makes the release of potentially significant levels of airborne vapor extremely unlikely, so that the most probable inhalation exposure would be to PCB-containing dusts generated during excavation. However, the low soil concentrations indicate that very high dust levels would need to be generated (see Section 10.0 Action Levels) for the current OSHA Permissible Exposure Limit (PEL) or American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) to be exceeded. Based on the low concentrations of PCBs in the soil, inhalation exposure potential is expected to be minimal. Further site controls described in Section 10.0 will eliminate the potential for such high dust levels. Inhalation of PCB-containing dust at high concentrations can result in liver damage and/or cause adverse reproductive effects or symptoms.

- Direct Contact and Ingestion:
  Direct skin contact with soils and ingestion of soils is possible if proper hygiene practices are not followed at the work site. The use of protective gloves and covering exposed skin, and hand, face and arm washing prior to eating, drinking or smoking will minimize skin absorption and ingestion potentials. Prolonged skin contact can result in symptoms such as chloroacne. Similar to inhalation, ingestion can result in liver damage and/or cause adverse reproductive effects or symptoms.

6.3.2 Residential Exposure Chemical Hazard Assessment

- Inhalation:
  As stated above, the low volatility of PCBs makes the generation of potentially significant levels of PCB vapor unlikely. Similarly, dust levels are not likely to be created that could pose potentially significant inhalation risk to residents. Regardless, the more conservative exposure level recommended by NIOSH will be used during all excavation activities which is 0.001 mg/m^3. Further residents will not be allowed in work zones during excavation activities, and site controls described in Section 10.0 will eliminate the potential for such high dust levels. As described in Section 6.3 inhalation of PCB-containing dust may have adverse effects.

- Direct Contact and Ingestion:
  Direct contact or potential ingestion is also an unlikely route for residents, provided that the immediate excavation work areas are monitored, restricted to qualified site personnel only and secured during the workday. The excavation will be properly covered or backfilled during non-working hours;

the immediate work areas will also be secured at night. Residents will no be allowed in work zones during excavation activities or in areas which have not been backfilled. As described in Section 6.3 skin contact and ingestion of PCB-containing dust may have adverse effects.

7.0 TRAINING

All personnel working on the excavation and removal of PCB-contaminated soils will have received 40 hour OSHA health and safety training in compliance with standards found in 29 CFR 1910.120(e) and will have maintained their training through annual refresher classes as required by 1910.120(e)(8). All personnel will be required to produce written certification of current training that meets the requirements of 1910.120(e)(6).

All personnel, including any visitors, will be provided with a site orientation prior to entering the work areas. All personnel involved in the excavation or tasks involving potential direct contact with PCB contaminated soils will be trained on the proper use of personal protective equipment, site physical and chemical hazards, decontamination procedures, engineering and administrative controls, site emergency procedures, and this HASP. Site specific training will address the tasks to be performed and the measures to be followed to ensure the safety of personnel. Safety briefings will be held as needed, at least once every 10 days, and will include a review of any safety and health issues that are related to site activities.

8.0 PERSONAL PROTECTIVE EQUIPMENT

Personnel engaged in excavation activities will use personal protective equipment (PPE) to protect against site hazards. Selection of PPE is dependent upon the types and concentrations of hazards present and the operations to be performed. See Attachment 2 for Hazard Assessment Summary.

Site personnel performing excavation activities during the project will use modified Level D protection. To ensure the safety personnel, the level of protection may be upgraded based on visual observations of excessive dust generation, confirmation with a Mini Real Time Aerosol Monitor (mini-RAM or equivalent) and the judgement of the SHSO. The requirements for upgrading the level of protection are presented in Section 9. Each level of protection is outlined in the table on the following page.

Level of Protection	Personnel Protective Equipment
Modified Level D	• Work clothes
	• Safety glasses
	• Hearing protectors (when needed)
	• Safety boots
	• Latex boot covers
	• Hard hat
	• Inner nitrile or latex surgical gloves with outer work gloves
	• Tyvek or other disposable coverall (for work tasks with the potential for contact with the PCB-contaminated soil (e.g., hand excavation activities))
Level C	• Full-face air purifying respirator (APR) with combination High Efficiency Particulate Air (HEPA) cartridges, NIOSH approved for protection against particulates and organic vapors, acid gases and formaldehyde
	• Work clothes
	• Safety boots
	• Hearing protectors (when needed)
	• Latex boot covers
	• Hard hat
	• Inner nitrile or latex surgical gloves with outer work gloves
	• Tyvek

9.0 MEDICAL SURVEILLANCE

All workers who will perform work on the project will be included in a medical surveillance program established by their own employer as required under 1910.120(f). At a minimum, medical examinations will include a medical and work history (or updated history if one is in the employee's file) and a current physical examination. Special emphasis will be places on the symptoms related to the handling of hazardous substances and health hazards, and to fitness for duty including the ability to wear any required PPE under expected Site conditions, such as temperature extremes, that may be expected. No employee will be permitted to work on the properties without having received a medical clearance from a licensed physician.

10.0 ACTION LEVELS

This HASP identifies Action Levels (ALs) that have been established to endure that the correct type of protection is used to protect personnel when specific conditions are encountered on the site. These ALs establish a trigger level which, if exceeded, require that a particular "action" be taken.

10.1 Action Level

In the preparation of the Action Level (AL), the results from the collection of soil samples that identified PCBs in the soil were reviewed. Using a maximum concentration of 6.2 milligrams of PCBs per kilogram of soil (6.2 mg/kg), an exposure limit for PCB-containing dusts was calculated using the following formula:

$$Action\ Level = \frac{EL\ (mg/m^3)\ (10^6)}{Soil\ Conc.\ (mg/kg)\ (Safety\ Factor)}$$

Where: EL= exposure limit (Permissible Exposure Limit (PEL) or Threshold Limit Value) (TLV)) (NIOSH PEL utilized)
Safety Factor = 10 (conservative factor based on adequacy of site characterization)

Substituting the values into the formula yields the following exposure limit:

$$\frac{0.001\ mg/m^3\ (10^6)}{6.2\ mg/kg\ (10)} = 16.1\ mg/m^3$$

From this equation, the total dust concentrations in air would need to reach 16 mg/m^3 to create an airborne concentration of PCBs that would equal the NIOSH PEL. Since this number is higher than the nuisance dust standard of a time weighted average (TWA) of 10 mg/m^3, the action level in this case defaults to the nuisance dust standard. In addition to the use of DataRAM to ensure ambient dust levels do not exceed the action level stated above, the Health and Safety Officer will ensure that no visible dust omissions occur. To prevent visible dust from occurring all areas will be misted using a Hudson-type sprayer.

10.2 Response to Action Level Exceedance

The AL will be used by the SHSO to determine when modification to the site level of protection should occur. The SHSO will have the authority to make decisions regarding the upgrading or downgrading of PPE based on visual observation of dust generation, the results of direct-reading instrument measurements and TWA air sampling specific for PCB, if warranted.

To reduce the exposure to employees, the highest priority will be given to engineering controls and administrative controls. An example of an engineering control involves the site to reduce the concentration of airborne dust. An example of an administrative

control involves changing the work practices or procedures. The site supervisor will implement any controls that are required to avoid the exposure of site personnel.

When determined by the SHSO, TWA sampling specific for PCBs may be conducted to confirm the exposure and the airborne concentration of the contaminant. In addition, TWA sampling will confirm the results obtained using the direct-reading instruments.

11.0 AIR MONITORING

11.1 Scope of Monitoring Activities

Air monitoring will be conducted to identify and quantify concentrations of airborne dust to verify and determine the level of worker protection needed and to document the level of airborne contaminants that may potentially migrate from the site to the residential homes. During excavation activities, air monitoring will target the following areas:

- The excavation area at the Properties;
- The closest portal into the home (door, window, etc.); and
- The site perimeters (when indicated by visible dust generation)

11.2 Direct-reading Measurements

The SHSO will conduct monitoring using a mini-RAM aerosol monitor when work activities are likely to generate dust concentrations, or when visual observation of dust from site activities indicates the need to monitor.

The direct-reading instruments will be calibrated according to manufacturer's instructions prior to field use. Calibration of the mini-RAM will be performed before and after sampling each day that the instrument is used. Daily calibration checks of the instrument, areas where measurements were taken, instrument settings, and readings obtained will be recorded in the site safety and health logbook. The battery in each unit will be recharged after use to maintain a good charge.

When collecting measurements using the mini-RAM, the readings will be taken over a minimum period of ten minutes in an area or areas representative of the workers' breathing zone. The SHSO will record the average result for the interval. This strategy accounts for the variability in the concentration with time and avoids the situation where a decision to change PPE is made based on one instantaneous measurement.

A mini-RAM will be set-up at the nearest portal to the excavation and will continuously monitor the dust concentrations during the excavation work. The SHSO will monitor the mini-RAM at least once every 30 minutes. The date, time and concentration will be recorded in a logbook.

11.3 Time-weighted Average Sampling

Time-weighted average (TWA) sampling will be conducted, if necessary based on MiniRAM readings, during excavation activities to evaluate employee exposures to PCBs at the discretion of the SHSO. TWA sampling will be collected at locations that will represent the most exposed work group to obtain a "worst-case" determination of exposures.

TWA samples will be collected, if necessary, by drawing a known volume of air across a 37-millimeter (mm) glass fiber filter collection media over and 8-hour period. The sampling and analytical procedures to be followed for the collection, handling, and analysis of the TWA work area and perimeter area samples are those prescribed by NIOSH Analytical Procedure 5503. The calibration protocols described in the NIOSH methods will be followed. All analysis will be performed by a laboratory accredited by the American Industrial Hygiene Association.

11.4 Protocol for Sampling

Measurements at these locations will be made at various intervals during the shift as determined by the SHSO. The monitoring protocols are as follows:

Task	Type Sampling
Excavation, dump truck loading and associated tasks (tamping and residual clean-up)	Periodic Mini-RAM (Direct Reading)- every 30 minutes Time Weighted Average (as indicated by visual observation and mini-RAM monitoring)
Residential home portal	Continuous Mini-RAM (Direct Reading)
Site perimeter	Periodic Mini-RAM (Direct Reading)- every 60 minutes

12.0 WORK ZONES

Because of the nature of the excavation, work zones will be established at the beginning of each work shift. The exclusion zone will include the immediate excavation area, including the equipment, and will extend twenty feet from the excavation or to the nearest physical structure (building, fence) if feasible. The perimeter of the exclusion zone will be demarcated with "caution" tape or other visible marking. If feasible, the contamination reduction zone will be positioned immediately adjacent to the perimeter of the exclusion zone, upwind of the prevailing wind direction. A disposal container will be located in this area for disposable PPE. The support zone will be located in an area convenient to the exclusion zone, but located such that it does not block traffic or interfere with other nearby residences.

13.0 DECONTAMINATION

13.1 Personnel Decontamination

The first step in the decontamination of personnel wearing PPE will involve the removal of equipment that is visibly contaminated. A decontamination are will be established in the contamination reduction zone. Step by step procedures to be followed include:

Step 1	If boot covers are used, remove boot covers and place in disposal container; if boot covers are not used, step into boot wash.
[Step 2]	[Remove protective suit and place in disposal container]
Step 3	Remove outer gloves and place in disposal container
[Step 4]	[Remove respirator and cartridges. Place cartridges in disposal container; place respirator in designated bin for decontamination and cleaning]
Step 5	Remove inner gloves and place in disposal container
Step 6	Wash and rinse hands and face
Note: [] denotes optional steps for decontamination of level C equipment if required.	

1.1 Equipment Decontamination

To minimize the need for decontamination, unnecessary equipment and vehicles will not be brought into the contaminated areas of the site. Decontamination of the equipment will be the responsibility of the Site workers and Contractors under the direction of the site supervisor or designee.

14.0 EMERGENCY RESPONSE

Site personnel will be prepared to respond quickly in the event of an emergency. Emergencies may include illnesses or injuries, fires, vehicle accidents, spills, releases of hazardous substances or sudden changes in the weather. Local Emergency Response Teams will be called on to respond in the event of an emergency (see Table 14-1).

The site supervisor has primary responsibility for responding to and correcting emergency situations. The site supervisor is also responsible for insuring that corrective action measures have been implemented, appropriate authorities notified and follow-up reports completed.

Personnel working on the project will receive training to ensure that they understand the procedures to follow in the even of an emergency. This includes:

- Hazard recognition;
- Signaling an emergency; and
- Evacuation routes.

The list of emergency contact phone numbers, provided in the table below, will be posted at all site telephones and vehicles. This list includes local emergency responders and medical facilities, and other agencies to be contacted in the event of an emergency.

Required emergency equipment locations on the site are as follows:

Eyewash:	Designated decontamination area
First aid kit:	Designated decontamination area
Fire extinguisher:	Designated decontamination area and on vehicles operating in the exclusion zone

The hospital or emergency care facility must be provided information concerning the nature of the emergency, who was injured, and any other information that will assist personnel in treating the injured worker. When calling for assistance in an emergency situation, the following information should be provided:

TABLE 14-1 Emergency Contact Phone Numbers	
Ambulance: South Plainfield Rescue Squad	911
Police: South Plainfield Police	911
Fire Department: South Plainfield Fire	911
Hospital General Number: Hospital Emergency Room:	908-668-2000 908-668-2200
Client contact:	617-832-1000
Poison Control Center:	(800)233-3360
CHEMTREC	(800)424-9300
National Pesticide Information	(800)845-6733

1. Name of person making call
2. Telephone number and location of person making call
3. Name of person(s) exposed or injured
4. Nature of emergency
5. Actions already taken

Recipient of call should hang up first--not the caller.

All injuries are illnesses must be immediately reported to the site supervisor. In the event of an injury or illness while on the job-site, first aid should be administered and an immediate determination should be made as to the need for further emergency treatment and/or transportation. Site personnel familiar with the incident should accompany any person transported to a hospital for treatment.

Any minor incident, not requiring hospitalization, should be handled by trained first aiders using first aid materials provided by them and maintained by the site supervisor. First-aid providers who may come in contact with or potentially come in contact with blood or other bodily fluids, should be informed about the requirements of the OSHA Bloodborne Pathogens Standard (29 CFR 1910.1030).

14.1 Route to Hospital

In the event that and injured person must be transported to the hospital, the following directions are provided to Muhlenburg Hospital (Hospital Route Map included in Figure E-1):

Turn west onto Spicer Avenue. Proceed to the corner and take a right onto Hamilton Avenue. Proceed to the first light and make a right onto Maple Avenue. Proceed on Maple Avenue to the next light and make a left onto Park Avenue. The hospital is approximately 1 mile down on the right. For emergency entrance, proceed to the end of the block and turn right onto Randolph Avenue.

14.2 First Aid for PCB Exposure

The following first aid instructions for PCB exposure are from the NIOSH Pocket Guide to Chemical Hazards:

Eyes:

- Immediately wash the eyes with large amount of water, occasionally lifting the lower and upper lids.
- Get medical attention immediately.
- Contact lenses should not be worn when working with this chemical.

Skin:

- Immediately wash the contaminated skin with soap and water.
- If this chemical penetrates the clothing, immediately remove the clothing, wash the skin with soap and water, and get medical attention promptly.

Inhalation:

- Move the exposed person to fresh air at once.
- If breathing has stopped, perform mouth-to-mouth resuscitation.
- Keep the affected person warm and at rest.
- Get medical attention as soon as possible.

Ingestion:

- If this chemical has been swallowed, get medical attention immediately.

15.0 SITE DOCUMENTATION

The site supervisor will maintain records of site briefings and a log indicating personnel working on the project and site visitors.

Training records will include, at a minimum:

- Date, starting time and duration of training;
- Topics covered, including any exercises performed or special instructions; and
- Roster of personnel who attended.

A daily log of personnel working on-site will be maintained. This log will provide a reference if an incident occurs and an accounting of personnel is required.

16.0 EATING, DRINKING, AND SMOKING PRECAUTIONS

Since ingestion is a potential contaminant exposure pathway, eating, drinking, and smoking will be prohibited near excavation activities. Site personnel working in the excavation areas will complete the required personnel decontamination upon exiting and prior to eating, drinking, or smoking.

APPENDIX B
ATTACHMENT 1

ALL SITE PERSONNEL HAVE READ THE ABOVE PLAN AND ATTACHED SAFETY AND HYGIENE RULES AND ARE FAMILIAR WITH ITS PROVISIONS.

I certify that I have read the Health & Safety Plan, its content, and limitations and agree to abide by the procedures discussed herein to ensure the health and safety of the project personnel and the general public. I further certify that I have received the proper training as set forth in 29 CFR 1910.120 and recognize that toxic and hazardous materials may exist on the site.

AFFILIATION	PRINT NAME	JOB FUNCTION	SIGNATURE	DATE

HAZARD ASSESSMENT SUMMARY

Job	Equipment Operator
Task	• Excavation of PCB-contaminated material (<50 ppm) • Operating loader
Hazard Type	☐ Physical ☒ Chemical
Body Protection	• 100 % natural fiber clothing • Disposable protective Tyvek
Hands and Feet	• Canvas work gloves, as needed • Steel toe work shoes • Disposable boot covers ready in machine in case emergency machine exit in work zone needed
Head	• Hard Hat when working outside loader
Eyes and Face	• Eyewear with side shields

Job	Field Personnel
Task	• Soil Sampling • Ground support
Hazard Type	☐ Physical ☒ Chemical
Body Protection	• 100 % natural fiber clothing • Disposable protective Tyvek • Reflective Traffic Vest.
Hands and Feet	• Canvas/leather glove outside chemical protective gloves, as needed • Double layer latex, inside • Nitrile outside, taped outside of Tyvek sleeve (samplers) • Nitrile outside, taped inside Tyvek sleeve (ground support) • Steel toe work shoes • Neoprene boots taped under Tyvek legs
Head	• Hard hat • Hearing protection, as needed
Eyes and Face	• Protective eyewear with side shields

APPENDIX B
ATTACHMENT 2

PERSONAL PROTECTIVE EQUIPMENT JOB/TASK HAZARD ASSESSMENT

Standard of the OSHA, 29 CFR 1910.132 - Personal Protective Equipment for General Industry
The information entered below will serve as the basis for the evaluation, selection, distribution of, and training for personal protective equipment (PPE) for the work location described below. This document only addresses the hazard related to that part of the body checked below and serves as the certification of hazard assessment as required at 1910.132 (d)(2).

DESCRIBE THE JOB/TASK THAT THIS HAZARD ASSESSMENT APPLIES TO:
For Some Sampling Soil / On Ground Assist Hose Tender Operator.

ABOVE SELECTION TO BE ASSESSED FOR THE FOLLOWING PERSONAL PROTECTIVE EQUIPMENT (select one only)

☑ 1 - EYES AND FACE ☐ 2 – HEAD ☐ 3 – HANDS ☐ 4 - FEET ☐ 5 - BODY

SPECIFIC HAZARDS TO BE ASSESSED:

IMPACT (applicable to eyes and face, head, hands, and feet)
HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Chipping	N		Power Fastening	N	
Grinding			Riveting		
Machining			Sanding		
Masonry/Concrete Work			Work at Elevations		
Woodworking			Low Hanging Equipment		
Sawing			Materials Transport		
Drilling			Other Dust	Y	Gloves w/ S&
Chiseling			Noise		F. Plugs - As Need.

PENETRATION (applicable to eyes and face, head, hands, and feet)
HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Woodworking	N		Machining	N	
Sawing			Splicing		
Drilling			Cutting		
Chiseling			Sharp Surfaces		
Power Fastening			Other		
Riveting					

COMPRESSION (applicable to hands and feet) N/A
HAZARD ASSESSMENT: Crushing, squeezing, or constricting action due to unexpected placement or shifting of material or angle of incidence.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Material Hoisting			Binding/Fastening Equip.		
Material Transport			Other		
Material Storage/Stacking					
Moving Equipment/Parts					

CHEMICAL (applicable to eyes and face, head, hands, feet, and body)
HAZARD ASSESSMENT: Aerosolizing, splashing, misting, etc. of materials which may come in contact with exposed skin and eyes.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Give describe)
Painting	N		Solvents	N	
Cleaning/Clean-ups			Fuels		
Water Treatment			Battery Charging		
Chemical Handling			Other		
Chemical By-Products					

Lubrication

HEAT (applicable to eyes and face, head, hands, feet, and body)

HAZARD ASSESSMENT: Contact with heated surfaces, hot sparks, molten metals, live electrical equipment, live steam, hot liquids.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
High Voltage Equipment			Welding/Cutting	Y	
Thermal Equipment			Brazing/Soldering		
Steam			Other		

HARMFUL DUST (applicable to eyes and face, hands, and body)

HAZARD ASSESSMENT: Contact with wood, metal and masonry dusts, asbestos fibers, lead fumes, etc.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Chipping			Chiseling		
Grinding			Welding/Cutting		
Machining			Brazing/Soldering		
Masonry/Concrete Work			Entrance into Vaults		
Woodworking			Entrance int Service Boxes		
Sawing			Removal/Inst. Insulation		
Drilling	Y		Other		

LIGHT - *OPTICAL RADIATION* - (applicable to eyes and face, head, hands, and body)

HAZARD ASSESSMENT: Exposure to ultraviolet, infrared, and other sources of energy.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Welding/Cutting			Electrical Arcing		
Brazing/Soldering			X-Ray Metallurgical Analysis		
Hot Reflecting Surfaces			Laser Equipment		
Glare			Other		

AVAILABLE PERSONAL PROTECTIVE EQUIPMENT Specify recommended PPE by item letter

☑ 1 - EYES & FACE	☐ 2 - HEAD	☐ 3 - HANDS	☐ 4 – FEET	☐ 5 – BODY
Item	*Item*	*Item*	*Item*	*Item*
A. Eyewear w/Side Shields	A. Hard Hats	A. Canvas Gloves	A. Steel Toe Work Shoes	A. 100% Natural Fiber Clothing
B. Goggles	B. Other	B. Rubber Gloves & Sleeves	B. Metatarsal Protectors	B. Fire-Retardant (i.e., Nomex®) Clothing
C. Face Shields		C. Leather Palm Gloves	C. Puncture-Resistant Soles	C. Saranex® Coveralls
D. Glare Protection		D. Latex Gloves	D. Chemical-Resistant Soles	D. Polycoated Coveralls
E. UV Protection		E. Nitrile Gloves	E. Sanke Guards	E. Tyvek Coveralls
F. Welding Masks		F. Other	F. Other	F. Leather Clothing (i.e., Welding Jacket, Chaps)
G. Other				G. Chemical-Resistant Clothing
				H. Other

CERTIFICATION STATEMENT

I certify that the information provided above accurately reflects the hazards, if any, at the above-noted location.

NAME: J. Fraga

TITLE: D.I SS

DEPARTMENT:

SECTION:

SIGNATURE:

DATE: 10/18/00

Reviewed by: (Director of Safety & Health)

Date: 10/18/00

PERSONAL PROTECTIVE EQUIPMENT JOB/TASK HAZARD ASSESSMENT

Standard of the OSHA, 29 CFR 1910.132 - Personal Protective Equipment for General Industry
The information entered below will serve as the basis for the evaluation, selection, distribution of, and training for personal protective equipment (PPE) for the work location described below. This document only addresses the hazard related to that part of the body checked below and serves as the certification of hazard assessment as required at 1910.132 (d)(2).

DESCRIBE THE JOB/TASK THAT THIS HAZARD ASSESSMENT APPLIES TO: Personnel Supplying Soil / On Ground Assistance to the Operator

ABOVE SELECTION TO BE ASSESSED FOR THE FOLLOWING PERSONAL PROTECTIVE EQUIPMENT (select one only):

☐ 1 - EYES AND FACE ☑ 2 – HEAD ☐ 3 – HANDS ☐ 4 - FEET ☐ 5 - BODY

SPECIFIC HAZARDS TO BE ASSESSED

IMPACT (applicable to eyes and face, head, hands, and feet)

HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Chipping	N		Power Fastening	N	
Grinding	↓		Riveting	↓	
Machining	↓		Sanding	↓	
Masonry/Concrete Work	↓		Work at Elevations	↓	
Woodworking	↓		Low Hanging Equipment	Y	Hard Hat
Sawing	↓		Materials Transport	↓	
Drilling	↓		Other	↓	
Chiseling	↓				

PENETRATION (applicable to eyes and face, head, hands, and feet)

HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Woodworking	N		Machining	N	
Sawing	↓		Splicing	↓	
Drilling	↓		Cutting	↓	
Chiseling	↓		Sharp Surfaces	↓	
Power Fastening	↓		Other	↓	
Riveting	↓				

COMPRESSION (applicable to hands and feet) NA

HAZARD ASSESSMENT: Crushing, squeezing, or constricting action due to unexpected placement or shifting of material or angle of incidence.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Material Hoisting			Binding/Fastening Equip.		
Material Transport			Other		
Material Storage/Stacking					
Moving Equipment/Parts					

CHEMICAL (applicable to eyes and face, head, hands, feet, and body)

HAZARD ASSESSMENT: Aerosolizing, splashing, misting, etc. of materials which may come in contact with exposed skin and eyes.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Give describe)
Painting	N		Solvents	N	
Cleaning/Clean-ups	↓		Fuels	↓	
Water Treatment	↓		Battery Charging	↓	
Chemical Handling	↓		Other	↓	
Chemical By-Products	↓				

Lubrication

HEAT (applicable to eyes and face, head, hands, feet, and body)

HAZARD ASSESSMENT: Contact with heated surfaces, hot sparks, molten metals, live electrical equipment, live steam, hot liquids.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
High Voltage Equipment	Y		Welding/Cutting	Y	
Thermal Equipment			Brazing/Soldering		
Steam			Other		

HARMFUL DUST (applicable to eyes and face, hands, and body) N/A

HAZARD ASSESSMENT: Contact with wood, metal and masonry dusts, asbestos fibers, lead fumes, etc.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Chipping			Chiseling		
Grinding			Welding/Cutting		
Machining			Brazing/Soldering		
Masonry/Concrete Work			Entrance into Vaults		
Woodworking			Entrance int Service Boxes		
Sawing			Removal/Inst. Insulation		
Drilling			Other		

LIGHT - *OPTICAL RADIATION* - (applicable to eyes and face, head, hands, and body) N/A

HAZARD ASSESSMENT: Exposure to ultraviolet, infrared, and other sources of energy.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Welding/Cutting	Y		Electrical Arcing	Y	
Brazing/Soldering			X-Ray Metallurgical Analysis		
Hot Reflecting Surfaces			Laser Equipment		
Glare			Other		

AVAILABLE PERSONAL PROTECTIVE EQUIPMENT Specify recommended PPE by item letter

☐ 1 - EYES & FACE	☒ 2 - HEAD	☐ 3 - HANDS	☐ 4 – FEET	☐ 5 – BODY
Item	*Item*	*Item*	*Item*	*Item*
A. Eyewear w/Side Shields	A. Hard Hats	A. Canvas Gloves	A. Steel Toe Work Shoes	A. 100% Natural Fiber Clothing
B. Goggles	B. Other Ear Protection As Needed	B. Rubber Gloves & Sleeves	B. Metatarsal Protectors	B. Fire-Retardant (i.e., Nomex®) Clothing
C. Face Shields		C. Leather Palm Gloves	C. Puncture-Resistant Soles	C. Saranex® Coveralls
D. Glare Protection		D. Latex Gloves	D. Chemical-Resistant Soles	D. Polycoated Coveralls
E. UV Protection		E. Nitrile Gloves	E. Sanke Guards	E. Tyvek Coveralls
F. Welding Masks		F. Other	F. Other	F. Leather Clothing (i.e., Welding Jacket, Chaps)
G. Other				G. Chemical-Resistant Clothing
				H. Other

CERTIFICATION STATEMENT

I certify that the information provided above accurately reflects the hazards, if any, at the above-noted location.

NAME: J. Hrabe TITLE: Dir SS

DEPARTMENT: SECTION:

SIGNATURE: DATE: 10/18/00

Reviewed by: (Director of Safety & Health) Date: 10/18/00

PERSONAL PROTECTIVE EQUIPMENT JOB/TASK HAZARD ASSESSMENT

Standard of the OSHA, 29 CFR 1910.132 - Personal Protective Equipment for General Industry
The information entered below will serve as the basis for the evaluation, selection, distribution of, and training for personal protective equipment (PPE) for the work location described below. This document only addresses the hazard related to that part of the body checked below and serves as the certification of hazard assessment as required at 1910.132 (d)(2).

DESCRIBE THE JOB/TASK THAT THIS HAZARD ASSESSMENT APPLIES TO:
Personal Sampling Soil/Coal Ground Assistance to Loader Operator. PAH's Metals Other Metals

ABOVE SELECTION TO BE ASSESSED FOR THE FOLLOWING PERSONAL PROTECTIVE EQUIPMENT (select one only)

☐ 1 - EYES AND FACE ☐ 2 – HEAD ☑ 3 – HANDS ☐ 4 - FEET ☐ 5 - BODY

SPECIFIC HAZARDS TO BE ASSESSED

IMPACT (applicable to eyes and face, head, hands, and feet)
HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Chipping	N		Power Fastening	Y	
Grinding			Riveting		
Machining			Sanding		
Masonry/Concrete Work			Work at Elevations		
Woodworking			Low Hanging Equipment		
Sawing			Materials Transport		
Drilling			Other		
Chiseling					

PENETRATION (applicable to eyes and face, head, hands, and feet)
HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Woodworking	N		Machining	N	
Sawing			Splicing		
Drilling			Cutting	Y	Work Gloves.
Chiseling			Sharp Surfaces		
Power Fastening			Other	N.	
Riveting					

COMPRESSION (applicable to hands and feet)
HAZARD ASSESSMENT: Crushing, squeezing, or constricting action due to unexpected placement or shifting of material or angle of incidence.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Material Hoisting	N		Binding/Fastening Equip.		
Material Transport			Other		
Material Storage/Stacking					
Moving Equipment/Parts	Y	Work Gloves			

CHEMICAL (applicable to eyes and face, head, hands, feet, and body)
HAZARD ASSESSMENT: Aerosolizing, splashing, misting, etc. of materials which may come in contact with exposed skin and eyes.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Give describe)
Painting			Solvents		
Cleaning/Clean-ups			Fuels		
Water Treatment			Battery Charging		
Chemical Handling			Other PAH		
Chemical By-Products	Y	Double Latex Surgical w/Outer Nitrile		Y	Nitrile

Lubrication

HEAT (applicable to eyes and face, head, hands, feet, and body)

HAZARD ASSESSMENT: Contact with heated surfaces, hot sparks, molten metals, live electrical equipment, live steam, hot liquids.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
High Voltage Equipment	N		Welding/Cutting		
Thermal Equipment			Brazing/Soldering		
Steam	N		Other	N	

HARMFUL DUST (applicable to eyes and face, hands, and body)

HAZARD ASSESSMENT: Contact with wood, metal and masonry dusts, asbestos fibers, lead fumes, etc.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Chipping	N		Chiseling	N	
Grinding			Welding/Cutting		
Machining			Brazing/Soldering		
Masonry/Concrete Work			Entrance into Vaults		
Woodworking			Entrance int Service Boxes		
Sawing			Removal/Inst. Insulation		
Drilling	N		Other Soil	Y	Double Latex w/ Nitrile

LIGHT - *OPTICAL RADIATION* - (applicable to eyes and face, head, hands, and body)

HAZARD ASSESSMENT: Exposure to ultraviolet, infrared, and other sources of energy.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Welding/Cutting	N		Electrical Arcing	N	
Brazing/Soldering			X-Ray Metallurigical Analysis		
Hot Reflecting Surfaces			Laser Equipment		
Glare	N		Other		

AVAILABLE PERSONAL PROTECTIVE EQUIPMENT Specify recommended PPE by item letter

☐ 1 - EYES & FACE	☐ 2 - HEAD	☑ 3 - HANDS	☐ 4 – FEET	☐ 5 – BODY
Item	*Item*	*Item*	*Item*	*Item*
A. Eyewear w/Side Shields	A. Hard Hats	A. Canvas Gloves As Needed.	A. Steel Toe Work Shoes	A. 100% Natural Fiber Clothing
B. Goggles	B. Other	B. Rubber Gloves & Sleeves	B. Metatarsal Protectors	B. Fire-Retardant (i.e., Nomex®) Clothing
C. Face Shields		C. Leather Palm Gloves	C. Puncture-Resistant Soles	C. Saranex® Coveralls
D. Glare Protection		D. Latex Gloves 2 Layers	D. Chemical-Resistant Soles	D. Polycoated Coveralls
E. UV Protection		E. Nitrile Gloves 1 Layer	E. Sanke Guards	E. Tyvek Coveralls
F. Welding Masks		F. Other Type Nitrile to Tyvek, Outside (Simplex) to Type Nitrile To Tyvek Inside On Grand Support	F. Other	F. Leather Clothing (i.e., Welding Jacket, Chaps)
G. Other				G. Chemical-Resistant Clothing
				H. Other

CERTIFICATION STATEMENT

I certify that the information provided above accurately reflects the hazards, if any, at the above-noted location.

NAME: J. Trudeau TITLE: Dir SS

DEPARTMENT: SECTION:

SIGNATURE: DATE: 10/13/00

Reviewed by: (Director of Safety & Health) Date: 10/18/00

PERSONAL PROTECTIVE EQUIPMENT JOB/TASK HAZARD ASSESSMENT

Standard of the OSHA, 29 CFR 1910.132 - Personal Protective Equipment for General Industry
The information entered below will serve as the basis for the evaluation, selection, distribution of, and training for personal protective equipment (PPE) for the work location described below. This document only addresses the hazard related to that part of the body checked below and serves as the certification of hazard assessment as required at 1910.132 (d)(2).

DESCRIBE THE JOB/TASK THAT THIS HAZARD ASSESSMENT APPLIES TO:
Personal Sampling Soil/Or Ground Assistance to Loader Operator – PCB/Lead/Other Metals

ABOVE SELECTION TO BE ASSESSED FOR THE FOLLOWING PERSONAL PROTECTIVE EQUIPMENT (select one only)

☐ 1 - EYES AND FACE ☐ 2 – HEAD ☐ 3 – HANDS ☑ 4 – FEET ☐ 5 - BODY

SPECIFIC HAZARDS TO BE ASSESSED

IMPACT (applicable to eyes and face, head, hands, and feet)
HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Chipping	N		Power Fastening	N	
Grinding			Riveting		
Machining			Sanding		
Masonry/Concrete Work			Work at Elevations		
Woodworking			Low Hanging Equipment		
Sawing			Materials Transport		
Drilling			Other ______		
Chiseling					

PENETRATION (applicable to eyes and face, head, hands, and feet)
HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Woodworking	N		Machining	N	
Sawing			Splicing		
Drilling			Cutting		
Chiseling			Sharp Surfaces	Y	Work Boots
Power Fastening			Other ______	N	
Riveting					

COMPRESSION (applicable to hands and feet)
HAZARD ASSESSMENT: Crushing, squeezing, or constricting action due to unexpected placement or shifting of material or angle of incidence.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Material Hoisting	Y	Steel Toe Boots	Binding/Fastening Equip.	N	
Material Transport	N		Other ______		
Material Storage/Stacking					
Moving Equipment/Parts	Y				

CHEMICAL (applicable to eyes and face, head, hands, feet, and body)
HAZARD ASSESSMENT: Aerosolizing, splashing, misting, etc. of materials which may come in contact with exposed skin and eyes.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Give describe)
Painting	N		Solvents		
Cleaning/Clean-ups			Fuels		
Water Treatment			Battery Charging		
Chemical Handling	Y	Neoprene Boots	Other Dust		Neoprene Boots
Chemical By-Products					

Lubrication

HEAT (applicable to eyes and face, head, hands, feet, and body)

HAZARD ASSESSMENT: Contact with heated surfaces, hot sparks, molten metals, live electrical equipment, live steam, hot liquids.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
High Voltage Equipment	N		Welding/Cutting		
Thermal Equipment			Brazing/Soldering		
Steam			Other		

HARMFUL DUST (applicable to eyes and face, hands, and body)

HAZARD ASSESSMENT: Contact with wood, metal and masonry dusts, asbestos fibers, lead fumes, etc.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Chipping			Chiseling		
Grinding			Welding/Cutting		
Machining			Brazing/Soldering		
Masonry/Concrete Work			Entrance into Vaults		
Woodworking			Entrance int Service Boxes		
Sawing			Removal/Inst. Insulation		
Drilling			Other		

LIGHT - *OPTICAL RADIATION* - (applicable to eyes and face, head, hands, and body)

HAZARD ASSESSMENT: Exposure to ultraviolet, infrared, and other sources of energy.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Welding/Cutting	N		Electrical Arcing		
Brazing/Soldering			X-Ray Metallurgical Analysis		
Hot Reflecting Surfaces			Laser Equipment		
Glare			Other		

AVAILABLE PERSONAL PROTECTIVE EQUIPMENT Specify recommended PPE by item letter

☐ 1 - EYES & FACE	☐ 2 - HEAD	☐ 3 - HANDS	☑ 4 – FEET	☐ 5 – BODY
Item	*Item*	*Item*	*Item*	*Item*
A. Eyewear w/Side Shields	A. Hard Hats	A. Canvas Gloves	A. Steel Toe Work Shoes	A. 100% Natural Fiber Clothing
B. Goggles	B. Other	B. Rubber Gloves & Sleeves	B. Metatarsal Protectors	B. Fire-Retardant (i.e., Nomex®) Clothing
C. Face Shields		C. Leather Palm Gloves	C. Puncture-Resistant Soles	C. Saranex® Coveralls
D. Glare Protection		D. Latex Gloves	D. Chemical-Resistant Soles	D. Polycoated Coveralls
E. UV Protection		E. Nitrile Gloves	E. Sanke Guards	E. Tyvek Coveralls
F. Welding Masks		F. Other	F. Other	F. Leather Clothing (i.e., Welding Jacket, Chaps)
G. Other			Neoprene Boots Tyvek Taped Over Boots.	G. Chemical-Resistant Clothing
				H. Other

CERTIFICATION STATEMENT

I certify that the information provided above accurately reflects the hazards, if any, at the above-noted location.

NAME: J. Horcher TITLE: D. SS.

DEPARTMENT: SECTION:

SIGNATURE: DATE: 10/18/00

Reviewed by: (Director of Safety & Health) Date: 10/18/00

PERSONAL PROTECTIVE EQUIPMENT JOB/TASK HAZARD ASSESSMENT

Standard of the OSHA, 29 CFR 1910.132 - Personal Protective Equipment for General Industry
The information entered below will serve as the basis for the evaluation, selection, distribution of, and training for personal protective equipment (PPE) for the work location described below. This document only addresses the hazard related to that part of the body checked below and serves as the certification of hazard assessment as required at 1910.132 (d)(2).

DESCRIBE THE JOB/TASK THAT THIS HAZARD ASSESSMENT APPLIES TO:
Personnel Sampling Soil / Ground Water for Lead / Other Metals.

ABOVE SELECTION TO BE ASSESSED FOR THE FOLLOWING PERSONAL PROTECTIVE EQUIPMENT (select one only)

☐ 1 - EYES AND FACE ☐ 2 – HEAD ☐ 3 – HANDS ☐ 4 - FEET ☑ 5 - BODY

SPECIFIC HAZARDS TO BE ASSESSED

IMPACT (applicable to eyes and face, head, hands, and feet) N/A
HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Chipping			Power Fastening		
Grinding			Riveting		
Machining			Sanding		
Masonry/Concrete Work			Work at Elevations		
Woodworking			Low Hanging Equipment		
Sawing			Materials Transport		
Drilling			Other _____		
Chiseling					

PENETRATION (applicable to eyes and face, head, hands, and feet) N/A
HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Woodworking			Machining		
Sawing			Splicing		
Drilling			Cutting		
Chiseling			Sharp Surfaces		
Power Fastening			Other _____		
Riveting					

COMPRESSION (applicable to hands and feet) N/A
HAZARD ASSESSMENT: Crushing, squeezing, or constricting action due to unexpected placement or shifting of material or angle of incidence.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Material Hoisting			Binding/Fastening Equip.		
Material Transport			Other _____		
Material Storage/Stacking					
Moving Equipment/Parts					

CHEMICAL (applicable to eyes and face, head, hands, feet, and body)
HAZARD ASSESSMENT: Aerosolizing, splashing, misting, etc. of materials which may come in contact with exposed skin and eyes.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Give describe)
Painting					
Cleaning/Clean-ups			Solvents		
Water Treatment		Type Tyvek	Fuels		
Chemical Handling	Y		Battery Charging		
Chemical By-Products	Y		Other Dust	Y	

Lubrication

HEAT (applicable to eyes and face, head, hands, feet, and body)

HAZARD ASSESSMENT: Contact with heated surfaces, hot sparks, molten metals, live electrical equipment, live steam, hot liquids.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
High Voltage Equipment			Welding/Cutting		
Thermal Equipment			Brazing/Soldering		
Steam			Other		

HARMFUL DUST (applicable to eyes and face, hands, and body)

HAZARD ASSESSMENT: Contact with wood, metal and masonry dusts, asbestos fibers, lead fumes, etc.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Chipping			Chiseling		
Grinding			Welding/Cutting		
Machining			Brazing/Soldering		
Masonry/Concrete Work			Entrance into Vaults		
Woodworking			Entrance int Service Boxes		
Sawing			Removal/Inst. Insulation		
Drilling			Other		

LIGHT - *OPTICAL RADIATION* - (applicable to eyes and face, head, hands, and body)

HAZARD ASSESSMENT: Exposure to ultraviolet, infrared, and other sources of energy.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Welding/Cutting			Electrical Arcing		
Brazing/Soldering			X-Ray Metallurgical Analysis		
Hot Reflecting Surfaces			Laser Equipment		
Glare			Other Welder		

AVAILABLE PERSONAL PROTECTIVE EQUIPMENT Specify recommended PPE by item letter

☐ 1 - EYES & FACE	☐ 2 - HEAD	☐ 3 - HANDS	☐ 4 – FEET	☐ 5 – BODY
Item	*Item*	*Item*	*Item*	*Item*
A. Eyewear w/Side Shields	A. Hard Hats	A. Canvas Gloves	A. Steel Toe Work Shoes	A. 100% Natural Fiber Clothing
B. Goggles	B. Other	B. Rubber Gloves & Sleeves	B. Metatarsal Protectors	B. Fire-Retardant (i.e., Nomex®) Clothing
C. Face Shields		C. Leather Palm Gloves	C. Puncture-Resistant Soles	C. Saranex® Coveralls
D. Glare Protection		D. Latex Gloves	D. Chemical-Resistant Soles	D. Polycoated Coveralls
E. UV Protection		E. Nitrile Gloves	E. Sanke Guards	E. Tyvek Coveralls Types
F. Welding Masks		F. Other	F. Other	F. Leather Clothing (i.e., Welding Jacket, Chaps)
G. Other				G. Chemical-Resistant Clothing
				H. Other Reflective Safety Vest

CERTIFICATION STATEMENT

I certify that the information provided above accurately reflects the hazards, if any, at the above noted location.

NAME: [illegible] TITLE: DISS

DEPARTMENT: SECTION:

SIGNATURE: DATE: 10/18/00

Reviewed by: (Director of Safety & Health) Date: 10/18/00

PERSONAL PROTECTIVE EQUIPMENT JOB/TASK HAZARD ASSESSMENT

Standard of the OSHA, 29 CFR 1910.132 - Personal Protective Equipment for General Industry
The information entered below will serve as the basis for the evaluation, selection, distribution of, and training for personal protective equipment (PPE) for the work location described below. This document only addresses the hazard related to that part of the body checked below and serves as the certification of hazard assessment as required at 1910.132 (d)(2).

DESCRIBE THE JOB/TASK THAT THIS HAZARD ASSESSMENT APPLIES TO:
Equipment Operations - Excavation of LD #27
Type Soil Working in Trench

ABOVE SELECTION TO BE ASSESSED FOR THE FOLLOWING PERSONAL PROTECTIVE EQUIPMENT (select one only)

☑ 1 - EYES AND FACE ☐ 2 – HEAD ☐ 3 – HANDS ☐ 4 - FEET ☐ 5 - BODY

SPECIFIC HAZARDS TO BE ASSESSED

IMPACT (applicable to eyes and face, head, hands, and feet)
HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Chipping	Y		Power Fastening	Y	
Grinding			Riveting		
Machining			Sanding		
Masonry/Concrete Work			Work at Elevations		
Woodworking			Low Hanging Equipment		
Sawing			Materials Transport		
Drilling			Other		
Chiseling					

PENETRATION (applicable to eyes and face, head, hands, and feet)
HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Woodworking	Y		Machining	Y	
Sawing			Splicing		
Drilling			Cutting		
Chiseling			Sharp Surfaces		
Power Fastening			Other		
Riveting					

COMPRESSION (applicable to hands and feet) N/A
HAZARD ASSESSMENT: Crushing, squeezing, or constricting action due to unexpected placement or shifting of material or angle of incidence.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Material Hoisting			Binding/Fastening Equip.		
Material Transport			Other		
Material Storage/Stacking					
Moving Equipment/Parts					

CHEMICAL (applicable to eyes and face, head, hands, feet, and body)
HAZARD ASSESSMENT: Aerosolizing, splashing, misting, etc of materials which may come in contact with exposed skin and eyes.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Give describe)
Painting	Y		Solvents	N	Use Safety Glasses
Cleaning/Clean-ups			Fuels	N	
Water Treatment			Battery Charging	N	
Chemical Handling			Other		
Chemical By-Products					

Lubrication

HEAT (applicable to eyes and face, head, hands, feet, and body)

HAZARD ASSESSMENT: Contact with heated surfaces, hot sparks, molten metals, live electrical equipment, live steam, hot liquids.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
High Voltage Equipment			Welding/Cutting		
Thermal Equipment			Brazing/Soldering		
Steam			Other		

HARMFUL DUST (applicable to eyes and face, hands, and body)

HAZARD ASSESSMENT: Contact with wood, metal and masonry dusts, asbestos fibers, lead fumes, etc.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Chipping			Chiseling		
Grinding			Welding/Cutting		
Machining			Brazing/Soldering		
Masonry/Concrete Work			Entrance into Vaults		
Woodworking			Entrance int Service Boxes		
Sawing			Removal/Inst. Insulation		
Drilling			Other Dust	Y	Welding Gloves

LIGHT - *OPTICAL RADIATION* - (applicable to eyes and face, head, hands, and body)

HAZARD ASSESSMENT: Exposure to ultraviolet, infrared, and other sources of energy.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Welding/Cutting	X		Electrical Arcing		
Brazing/Soldering			X-Ray Metallurgical Analysis		
Hot Reflecting Surfaces			Laser Equipment		
Glare			Other		

AVAILABLE PERSONAL PROTECTIVE EQUIPMENT Specify recommended PPE by item letter

☑ 1 - EYES & FACE	☐ 2 - HEAD	☐ 3 - HANDS	☐ 4 – FEET	☐ 5 – BODY
Item	*Item*	*Item*	*Item*	*Item*
A. Eyewear w/Side Shields	A. Hard Hats	A. Canvas Gloves	A. Steel Toe Work Shoes	A. 100% Natural Fiber Clothing
B. Goggles	B. Other	B. Rubber Gloves & Sleeves	B. Metatarsal Protectors	B. Fire-Retardant (i.e., Nomex®) Clothing
C. Face Shields		C. Leather Palm Gloves	C. Puncture-Resistant Soles	C. Saranex® Coveralls
D. Glare Protection		D. Latex Gloves	D. Chemical-Resistant Soles	D. Polycoated Coveralls
E. UV Protection		E. Nitrile Gloves	E. Sanke Guards	E. Tyvek Coveralls
F. Welding Masks		F. Other	F. Other	F. Leather Clothing (i.e., Welding Jacket, Chaps)
G. Other				G. Chemical-Resistant Clothing
				H. Other

CERTIFICATION STATEMENT

I certify that the information provided above accurately reflects the hazards, if any, at the above-noted location.

NAME: V. Trujillo TITLE: D. SS

DEPARTMENT: SECTION:

SIGNATURE: DATE: 10/18/00

Reviewed by: (Director of Safety & Health) Date: 10/18/00

PERSONAL PROTECTIVE EQUIPMENT JOB/TASK HAZARD ASSESSMENT

Standard of the OSHA, 29 CFR 1910.132 - Personal Protective Equipment for General Industry
The information entered below will serve as the basis for the evaluation, selection, distribution of, and training for personal protective equipment (PPE) for the work location described below. This document only addresses the hazard related to that part of the body checked below and serves as the certification of hazard assessment as required at 1910.132 (d)(2).

DESCRIBE THE JOB/TASK THAT THIS HAZARD ASSESSMENT APPLIES TO:
Equipment Operator - Excavating LD #27 Soil - Working in Trench

ABOVE SELECTION TO BE ASSESSED FOR THE FOLLOWING PERSONAL PROTECTIVE EQUIPMENT (select one only):

☐ 1 - EYES AND FACE ☑ 2 – HEAD ☐ 3 – HANDS ☐ 4 - FEET ☐ 5 - BODY

SPECIFIC HAZARDS TO BE ASSESSED:

IMPACT (applicable to eyes and face, head, hands, and feet)
HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Chipping	N		Power Fastening	N	
Grinding			Riveting		
Machining			Sanding		
Masonry/Concrete Work			Work at Elevations		
Woodworking			Low Hanging Equipment		
Sawing			Materials Transport		
Drilling			Other		
Chiseling					

PENETRATION (applicable to eyes and face, head, hands, and feet)
HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Woodworking	N		Machining	N	
Sawing			Splicing		
Drilling			Cutting		
Chiseling			Sharp Surfaces		
Power Fastening			Other		
Riveting					

COMPRESSION (applicable to hands and feet) N/A
HAZARD ASSESSMENT: Crushing, squeezing, or constricting action due to unexpected placement or shifting of material or angle of incidence.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Material Hoisting			Binding/Fastening Equip.		
Material Transport			Other		
Material Storage/Stacking					
Moving Equipment/Parts					

CHEMICAL (applicable to eyes and face, head, hands, feet, and body)
HAZARD ASSESSMENT: Aerosolizing, splashing, misting, etc. of materials which may come in contact with exposed skin and eyes.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Give describe)
Painting	N		Solvents	N	
Cleaning/Clean-ups			Fuels		
Water Treatment			Battery		
Chemical Handling			Other		
Chemical By-Products					

Lubrication

HEAT (applicable to eyes and face, head, hands, feet, and body)

HAZARD ASSESSMENT: Contact with heated surfaces, hot sparks, molten metals, live electrical equipment, live steam, hot liquids.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
High Voltage Equipment			Welding/Cutting		
Thermal Equipment			Brazing/Soldering		
Steam			Other		

HARMFUL DUST (applicable to eyes and face, hands, and body) N/A

HAZARD ASSESSMENT: Contact with wood, metal and masonry dusts, asbestos fibers, lead fumes, etc.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Chipping			Chiseling		
Grinding			Welding/Cutting		
Machining			Brazing/Soldering		
Masonry/Concrete Work			Entrance into Vaults		
Woodworking			Entrance int Service Boxes		
Sawing			Removal/Inst. Insulation		
Drilling			Other		

LIGHT - *OPTICAL RADIATION* - (applicable to eyes and face, head, hands, and body) N/A

HAZARD ASSESSMENT: Exposure to ultraviolet, infrared, and other sources of energy.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Welding/Cutting			Electrical Arcing		
Brazing/Soldering			X-Ray Metallurigical Analysis		
Hot Reflecting Surfaces			Laser Equipment		
Glare			Other		

AVAILABLE PERSONAL PROTECTIVE EQUIPMENT Specify recommended PPE by item letter

☐ 1 - EYES & FACE	☑ 2 - HEAD	☐ 3 - HANDS	☐ 4 – FEET	☐ 5 – BODY
Item	*Item*	*Item*	*Item*	*Item*
A. Eyewear w/Side Shields	A. Hard Hats	A. Canvas Gloves	A. Steel Toe Work Shoes	A. 100% Natural Fiber Clothing
B. Goggles	B. Other Outside of Lower	B. Rubber Gloves & Sleeves	B. Metatarsal Protectors	B. Fire-Retardant (i.e., Nomex®) Clothing
C. Face Shields		C. Leather Palm Gloves	C. Puncture-Resistant Soles	C. Saranex® Coveralls
D. Glare Protection		D. Latex Gloves	D. Chemical-Resistant Soles	D. Polycoated Coveralls
E. UV Protection		E. Nitrile Gloves	E. Sanke Guards	E. Tyvek Coveralls
F. Welding Masks		F. Other	F. Other	F. Leather Clothing (i.e., Welding Jacket, Chaps)
G. Other				G. Chemical-Resistant Clothing
				H. Other

CERTIFICATION STATEMENT

I certify that the information provided above accurately reflects the hazards, if any, at the above noted location.

NAME: J. Howle — TITLE: Dir SS

DEPARTMENT: — SECTION:

SIGNATURE: — DATE: 10/18/00

Reviewed by: (Director of Safety & Health) — Date: 10/18/00

PERSONAL PROTECTIVE EQUIPMENT JOB/TASK HAZARD ASSESSMENT

Standard of the OSHA, 29 CFR 1910.132 - Personal Protective Equipment for General Industry
The information entered below will serve as the basis for the evaluation, selection, distribution of, and training for personal protective equipment (PPE) for the work location described below. This document only addresses the hazard related to that part of the body checked below and serves as the certification of hazard assessment as required at 1910.132 (d)(2).

DESCRIBE THE JOB/TASK THAT THIS HAZARD ASSESSMENT APPLIES TO:
Equipment Operator / Excavation & Dirt Loading Dump Loader

ABOVE SELECTION TO BE ASSESSED FOR THE FOLLOWING PERSONAL PROTECTIVE EQUIPMENT (select one only)

☐ 1 - EYES AND FACE ☐ 2 – HEAD ☑ 3 – HANDS ☑ 4 - FEET ☐ 5 - BODY

SPECIFIC HAZARDS TO BE ASSESSED

IMPACT (applicable to eyes and face, head, hands, and feet)
HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Chipping			Power Fastening		
Grinding			Riveting		
Machining			Sanding		
Masonry/Concrete Work			Work at Elevations		
Woodworking			Low Hanging Equipment		
Sawing			Materials Transport		
Drilling			Other _____		
Chiseling					

PENETRATION (applicable to eyes and face, head, hands, and feet)
HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Woodworking			Machining		
Sawing			Splicing		
Drilling			Cutting		
Chiseling			Sharp Surfaces		
Power Fastening			Other _____		
Riveting					

COMPRESSION (applicable to hands and feet)
HAZARD ASSESSMENT: Crushing, squeezing, or constricting action due to unexpected placement or shifting of material or angle of incidence.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Material Hoisting			Binding/Fastening Equip.		
Material Transport			Other _____		
Material Storage/Stacking					
Moving Equipment/Parts	Y	Work Gloves Steel Toe Boots			

CHEMICAL (applicable to eyes and face, head, hands, feet, and body)
HAZARD ASSESSMENT: Aerosolizing, splashing, misting, etc. of materials which may come in contact with exposed skin and eyes.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Give describe)
Painting			Solvents		
Cleaning/Clean-ups			Fuels		
Water Treatment			Battery Charging		
Chemical Handling			Other Dust		
Chemical By-Products				Y	Hose Proof Covers in Use Machine Eq. if Needed.

Lubrication

HEAT (applicable to eyes and face, head, hands, feet, and body)

HAZARD ASSESSMENT: Contact with heated surfaces, hot sparks, molten metals, live electrical equipment, live steam, hot liquids.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
High Voltage Equipment			Welding/Cutting		
Thermal Equipment			Brazing/Soldering		
Steam			Other		

HARMFUL DUST (applicable to eyes and face, hands, and body)

HAZARD ASSESSMENT: Contact with wood, metal and masonry dusts, asbestos fibers, lead fumes, etc.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Chipping			Chiseling		
Grinding			Welding/Cutting		
Machining			Brazing/Soldering		
Masonry/Concrete Work			Entrance into Vaults		
Woodworking			Entrance int Service Boxes		
Sawing			Removal/Inst. Insulation		
Drilling			Other		

LIGHT - *OPTICAL RADIATION* - (applicable to eyes and face, head, hands, and body)

HAZARD ASSESSMENT: Exposure to ultraviolet, infrared, and other sources of energy.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Welding/Cutting			Electrical Arcing		
Brazing/Soldering			X-Ray Metallurgical Analysis		
Hot Reflecting Surfaces			Laser Equipment		
Glare			Other		

AVAILABLE PERSONAL PROTECTIVE EQUIPMENT Specify recommended PPE by item letter

☐ 1 - EYES & FACE	☐ 2 - HEAD	☑ 3 - HANDS	☑ 4 – FEET	☐ 5 – BODY
Item	*Item*	*Item*	*Item*	*Item*
A. Eyewear w/Side Shields	A. Hard Hats	A. Canvas Gloves	A. Steel Toe Work Shoes	A. 100% Natural Fiber Clothing
B. Goggles	B. Other	B. Rubber Gloves & Sleeves	B. Metatarsal Protectors	B. Fire-Retardant (i.e., Nomex®) Clothing
C. Face Shields		C. Leather Palm Gloves	C. Puncture-Resistant Soles	C. Saranex® Coveralls
D. Glare Protection		D. Latex Gloves	D. Chemical-Resistant Soles	D. Polycoated Coveralls
E. UV Protection		E. Nitrile Gloves	E. Sanke Guards	E. Tyvek Coveralls
F. Welding Masks		F. Other	F. Other	F. Leather Clothing (i.e., Welding Jacket, Chaps)
G. Other			Disposable Boot Covers Available in Machine	G. Chemical-Resistant Clothing
				H. Other

CERTIFICATION STATEMENT

I certify that the information provided above accurately reflects the hazards, if any, at the above-noted location.

NAME: V. L. Fowler — TITLE: Dir. SS

DEPARTMENT: — SECTION:

SIGNATURE: — DATE: 10/18/00

Reviewed by: (Director of Safety & Health) — Date: 10/18/00

PERSONAL PROTECTIVE EQUIPMENT JOB/TASK HAZARD ASSESSMENT

Standard of the OSHA, 29 CFR 1910.132 - Personal Protective Equipment for General Industry

The information entered below will serve as the basis for the evaluation, selection, distribution of, and training for personal protective equipment (PPE) for the work location described below. This document only addresses the hazard related to that part of the body checked below and serves as the certification of hazard assessment as required at 1910.132 (d)(2).

DESCRIBE THE JOB/TASK THAT THIS HAZARD ASSESSMENT APPLIES TO:

Equipment Operation - Excavation - to 27 Soil Working in Trench

ABOVE SELECTION TO BE ASSESSED FOR THE FOLLOWING PERSONAL PROTECTIVE EQUIPMENT (select one only):

☐ 1 - EYES AND FACE ☐ 2 – HEAD ☐ 3 – HANDS ☐ 4 - FEET ☑ 5 - BODY

SPECIFIC HAZARDS TO BE ASSESSED

IMPACT (applicable to eyes and face, head, hands, and feet) N/A

HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Chipping	N		Power Fastening		
Grinding			Riveting		
Machining			Sanding		
Masonry/Concrete Work			Work at Elevations		
Woodworking			Low Hanging Equipment		
Sawing			Materials Transport		
Drilling			Other		
Chiseling					

PENETRATION (applicable to eyes and face, head, hands, and feet) N/A

HAZARD ASSESSMENT: Moving equipment parts, serrated edges, sharpened tool surfaces or blades, shearing/cutting equipment, pointed objects, powered fastening devices.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Woodworking			Machining		
Sawing			Splicing		
Drilling			Cutting		
Chiseling			Sharp Surfaces		
Power Fastening			Other		
Riveting					

COMPRESSION (applicable to hands and feet) N/A

HAZARD ASSESSMENT: Crushing, squeezing, or constricting action due to unexpected placement or shifting of material or angle of incidence.

Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present? (Y/N)	Recommended PPE (Describe)
Material Hoisting			Binding/Fastening Equip.		
Material Transport			Other		
Material Storage/Stacking					
Moving Equipment/Parts					

CHEMICAL (applicable to eyes and face, head, hands, feet, and body)

HAZARD ASSESSMENT: Aerosolizing, splashing, misting, etc. of materials which may come to contact with exposed skin and eyes.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Give describe)
Painting	N		Solvents		
Cleaning/Clean-ups			Fuels		
Water Treatment			Battery Charging		
Chemical Handling			Other Dust	Y	Tyvek (Type)
Chemical By-Products					

Lubrication

HEAT (applicable to eyes and face, head, hands, feet, and body)

HAZARD ASSESSMENT: Contact with heated surfaces, hot sparks, molten metals, live electrical equipment, live steam, hot liquids

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
High Voltage Equipment			Welding/Cutting		
Thermal Equipment			Brazing/Soldering		
Steam			Other		

HARMFUL DUST (applicable to eyes and face, hands, and body)

HAZARD ASSESSMENT: Contact with wood, metal and masonry dusts, asbestos fibers, lead fumes, etc.

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Chipping			Chiseling		
Grinding			Welding/Cutting		
Machining			Brazing/Soldering		
Masonry/Concrete Work			Entrance into Vaults		
Woodworking			Entrance int Service Boxes		
Sawing			Removal/Inst. Insulation		
Drilling			Other		

LIGHT - OPTICAL RADIATION (applicable to eyes and face, head, hands, and body)

HAZARD ASSESSMENT: Exposure to ultraviolet, infrared, and other sources of energy

Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)	Potential Sources	Is source present (Y/N)	Recommended PPE (Describe)
Welding/Cutting			Electrical Arcing		
Brazing/Soldering			X-Ray Metallurgical Analysis		
Hot Reflecting Surfaces			Laser Equipment		
Glare			Other		

AVAILABLE PERSONAL PROTECTIVE EQUIPMENT Specify recommended PPE by item letter

☐ 1 - EYES & FACE	☐ 2 - HEAD	☐ 3 - HANDS	☐ 4 – FEET	☑ 5 – BODY
Item	*Item*	*Item*	*Item*	*Item*
A. Eyewear w/Side Shields	A. Hard Hats	A. Canvas Gloves	A. Steel Toe Work Shoes	A. 100% Natural Fiber Clothing
B. Goggles	B. Other	B. Rubber Gloves & Sleeves	B. Metatarsal Protectors	B. Fire-Retardant (i.e., Nomex®) Clothing
C. Face Shields		C. Leather Palm Gloves	C. Puncture-Resistant Soles	C. Saranex® Coveralls
D. Glare Protection		D. Latex Gloves	D. Chemical-Resistant Soles	D. Polycoated Coveralls
E. UV Protection		E. Nitrile Gloves	E. Sanke Guards	E. Tyvek Coveralls
F. Welding Masks		F. Other	F. Other	F. Leather Clothing (i.e., Welding Jacket, Chaps)
G. Other				G. Chemical-Resistant Clothing
				H. Other

CERTIFICATION STATEMENT

I certify that the information provided above accurately reflects the hazards, if any, at the above-noted location.

NAME: J. Hughes TITLE:

DEPARTMENT: SS SECTION:

SIGNATURE: DATE: 10/18/00

Reviewed by: (Director of Safety & Health) Date: 10/18/00

APPENDIX C

APPENDIX C
TREATMENT AND DISPOSAL FACILITY INFORMATION

LANDFILLS AND TREATMENT FACILITIES CONSIDERED FOR DISPOSAL OF PCB CONTAINING SOILS

1. **CWM Chemical Services, Model City, NY**

   Mailing Address: CWM Chemical Services, L.L.C.
   1550 Balmer Road
   PO Box 200
   Model City, NY 14107

   PCB Acceptable Limit: 500ppm

2. **Casie Protank Ecological and Environmental Services/MART Technologies**

   Mailing Addresss: Casie Protank
   3209 North Mill Road
   Vineland, NJ 08360
   EPA ID# NJD045995693

   PCB Acceptable Limit: 50 ppm

800 354 2584

APPENDIX D

CONSENT FOR ACCESS AGREEMENT

Name of Owner: Eugene Pesaniello, Sr.

Address of Owner: 77 Murray Avenue
Piscataway, NJ 08854-3145

Name of Occupant: Eugene Pesaniello, Jr.

Address of Occupant: 126 Spicer Avenue
South Plainfield, NJ 07080

Property: 126 South Plainfield Avenue
Block 337, Lots 14, 14.01 and 15
South Plainfield, Middlesex County, NJ

I consent to officers, employees, agents, contractors and other authorized representatives of D.S.C. of Newark, Inc. ("DSC") for entering and having access to my property and all improvements thereon for purposes of removing therefrom contaminated soil and other harmful or potentially harmful contaminated materials.

I realize that these actions are undertaken by DSC under its written Administrative Order on Consent with the United States EPA.

This written permission is given by me voluntarily with knowledge of my right to refuse and without threats or promises of any kind.

By signing below, I certify that I am either the owner or the occupant of the above-referenced property which will be affected by this Agreement, and that I am authorized to enter into this Agreement.

Owner:

Eugene Pesaniello Sr.
Eugene Pesaniello, Sr.

Date: July 25, 2000

Phone No. 908-756-3251

Occupant:

Eugene Pesaniello
Eugene Pesaniello, Jr.

Date: July ___, 2000

Phone No. 908-757-2917

APPENDIX E

APPENDIX E
RESTORATION PLAN

1.0 INTRODUCTION

This restoration plan outlines the scope of work for replacing existing landscape features that may be disturbed as a result of the excavation, removal and transportation of polychlorinated biphenyl (PCB) contaminated soils associated with the Removal Action Work Plan for the Property located at 126 Spicer Avenue, South Plainfield, NJ.

2.0 SITE DESCRIPTION

The Removal Action Work Plan activities will take place at 126 Spicer Avenue. This property is directly across the street from the Hamilton Industrial Park. The lot is mainly covered by grass vegetation with the exception of five trees and a few small evergreen foundation plantings.

3.0 RESTORATION PLAN

Existing landscaping and physical features (trees, bushes etc) were inventoried by Oxford personnel. Anticipated impacted plantings are as follows:

- Mature sod lawn (in excavation areas)
- Small evergreen foundation plantings
- Mature tree adjacent to Area A (in case excavation of Area A is extended)

Oxford will protect mature sod lawn in areas where machine traffic is anticipated but without excavation. Protection will include placing geotextile fabric to overlay lawn. This will in turn be overlain with mulch (wood chips) which will then also be covered with geotextile fabric.

Following the completion of excavation activities each work day, the excavated areas will be backfilled with clean soil and graded to original condition. Once backfilling activities have been completed at the Property, the landscaping will be restored to existing conditions or equivalent value. In places where excavation will take place or sod damage occurs in traffic areas, mature sod will be replaced by NJ grown mature sod.

Replacement foundation plantings from the excavation of Area B will consist of low profile taxus (Taxus, sp.), azalea (Azalea sp.), and low profile juniper (Juniperus vir. sp.). Final planting selection and planting will take place after discussion with owner.

In cases where more than 30% of mature tree roots are damaged during excavation (only anticipated in excavation A if extended based on sampling results), Oxford will arrange for planting of replacement tree(s). Replacement tree(s) will have a minimum diameter at breast hieght (DBH) of at least three (3) inches. Replacement trees species will be NJ grown red oak (Quercus rubra).

Finally, there are no structures (e.g. pools; fences) on this property that will need to be restored the original value and/or location.

APPENDIX F

PROJECT SCHEDULE

Cornell Dubilier Electronics - 126 Spicer Avenue
South Plainfield, New Jersey

10/23/00